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Editorial Notes.

Six Months' Imports into the United Kingdom. The details of the imports of petroleum products into the United Kingdom during the first half of the year shew that the approximate amount imported for that period reached 145,000,000 gallons, or a decrease of 6,000,000 gallons when compared with the total for the corresponding period a year ago. The decrease is more than accounted for by the drop in the imports of both illuminating and lubricating oil, for the former shews a deficit when compared with the figures for the first six months of last year of about 15,000,000 gallons, and the latter a drop of an even greater quantity. On the other hand, however, benzine and fuel oil both shew increased returns, the former having increased to the extent of 33 per cent., while in the imports of fuel oil the figures for the first six months of last year have been thereabouts doubled.

And from whence they come. An analysis of the returns clearly indicates the trend of events. America is going speedily ahead on the one hand, while on the other, Russia has lost considerable ground. Though the total quantity imported, as we have already shewn, is below that for the six months of last year, the imports from America have increased to the extent of about 7,000,000 gallons, but the total imports from Russia have decreased from 38,000,000 gallons to about 19,000,000 gallons. In other words, during the first six months of this year America has been responsible for 75 per cent. of the total petroleum imports into the United Kingdom, and Russia for 14 per cent., while Roumania and Borneo have contributed each three per cent., the remaining five per cent. being divided between the other countries. For the corresponding period of last year Russia was responsible for 25 per cent., and America for 66 per cent. The greatest percentage in the decrease of Russia's trade with England for the six months is in regard to lubricating oil, while in the case of America, though the illuminating oils have decreased in amount to a slight extent, her lubricating oil business has considerably increased, 10,000,000 gallons being the difference between the six months of last year and this. Roumania is steadily gaining ground in this country, and her imports of oil are increasing, but the one producing field which stands out very prominently in the classified list is Borneo. For the first half of last year we recorded no imports of Borneo benzine to this country, though Sumatra figured largely, but this year, Borneo has come forward with over 4,000,000 gallons of benzine for our English markets, while the imports of Sumatra oil shew considerable decline.

The Recent Manœuvres and Liquid Fuel. The recent manœuvres have, even more than anything else, demonstrated the great advantages consequent upon the use of liquid fuel for firing purposes instead of coal, and in future the Admiralty are to fit all their torpedo craft as well as their large battleships for oil consumption. The wisdom of this decision has been so conclusively proved during the manœuvres that none of the torpedo craft will in future carry coal for any purpose whatever. It is interesting to recall the fact that the battleships under Vice-Admiral Sir William May, of the King Edward VII. class, carry about 2,000 tons of coal each, and as an auxiliary just over 450 tons of oil stored either in the double bottom or in tanks. During the manœuvres these vessels covered nearly 4,000 miles, travelling seldom below 17 knots, and for three hours they ran slightly over 20 knots per hour. This wonderful achievement by vessels which were built for a trial speed of 18½ knots is directly traceable to the use of liquid fuel, which was used when all the coal in convenient bunkers had been exhausted. The vessels just alluded to ran away victoriously from Admiral Sir Arthur Wilson's vessels, nominally very much quicker steamers, but firing without liquid fuel. This success for liquid fuel, combined with the ease with which vessels can be loaded at sea, has resulted as we have before stated.

Bidding for the European Trade. Negotiations between the Deutsch-Russische Naphtha Import Gesellschaft, representing the Russian petroleum exporters, and the Deutsche Bank, representing the Roumanian petroleum trade, which have been in progress for some time, and of which rumours have reached us on previous occasions, are now said to have attained a successful result. The arrangement arrived at is that the Petroleum Producte Co., controlled by the Deutsche Bank, shall be amalgamated with the Deutsche Russische Naphtha Import Gesellschaft. The formal amalgamation will take place shortly, after the details of staff, title of firm, and the questions connected with the future working of the company, have been settled. The company will probably establish a sales office in London, under the management of Dr. Hertz, to whom the Deutsche Bank has entrusted the conduct of all their petroleum enterprises. This arrangement involves the withdrawal from the European markets of the Shell Co., which was largely interested in the Petroleum Producte Co.

American Exports for May. Another decline both in amount and value of petroleum products exported from America has to be recorded for May when the figures are compared with those of the preceding month. Those who are competent to judge the position in America ascribe this slackness not to any change in the markets towards American oil, but to the

position of the tank fleet. Compared with the April report, the decline in the exports during May was about 6,000,000 gallons, but when placed alongside the figures for the corresponding period of last year, the drop in amount is accompanied by a considerable gain in the value. The decrease in amount is conspicuous in the exports of crude oil, and those of lubricating and paraffin, the figures for illuminating oil being practically the same as they were a year ago. The details are found upon another column.

NEXT YEAR'S PETROLEUM CONGRESS.

A FEW DETAILS.

The following are the general lines on which it is proposed to organise next year's Petroleum Congress in Roumania:—

The Congress will be held in Bucarest in September, 1907, under the patronage of Crown Prince Ferdinand of Roumania, who is taking a particular interest in the industrial development of the country.

It is as yet impossible to say anything definite of the programme of the Congress, but as far as the Roumanian section is concerned it is proposed to complete the special investigations of Roumanian petroleum oils, more particularly those of the Prahova district, and also to complete the special investigation of the Government explored and non-explored petroliferous lands. A number of papers will be read on petroleum technology.

The Congress will be wound up by a visit of the members to the principal petroleum producing properties, while visits will also be paid to other industrial establishments in the country, and to the port of Constantza.

The Roumanian Commission of the Congress will include Messrs. Mrazec, Alimanestianu and Vintila Bratiann, member of the commission appointed to study the Government petroliferous lands; Messrs. Radu Pascu, Popouici Hatzeg, and other engineers of the Roumanian Geological Institute; Mr. V. Puscarin, Chief of the Mining Department; representatives of the Roumanian railways, Marine department, and the managers of all petroleum companies, and the principal petroleum producers in Roumania.

BAKU PRODUCTION DURING MAY.

The production of the principal firms at the oil fields during May (o.s.) was as under:—

	Poods.
Nobel Bros.	5,118,856
Caspian and Black Sea Society	3,111,959
Baku Naphtha Co.	2,425,418
Mantacheff and Co.	2,149,484
Moscow-Caucasian Co.	2,041,000
Caspian Society	1,956,077
Zouba'off	1,250,000
Mirzoeff Bros.	1,223,243
Aramazd Co.	1,203,050
Russian Petroleum and Liq. Fuel Co., Ltd.	1,192,000
M. Nagieff	1,176,784
Baku Russian Petroleum Co., Ltd.	1,139,044
Russian Naphtha Co.	1,070,660
Pitoeff and Co.	1,056,300
Bibi-Eybat Petroleum Co., Ltd.	1,029,500
Assadulaeff	966,615
Schibaieff and Co.	884,380
Naftalan Co.	789,256
Neft Co.	620,000
Ter Akopoff Co.	610,311
Shikhovo Co.	600,178
European Petroleum Co., Ltd.	484,400

LONDON OIL SHARE MARKET.

FRIDAY, JULY 6TH.

The London Stock Markets have been very unsettled since we last wrote. The shrinkage in Consols and leading English Securities, combined with the fall in Kaffirs and break in the American Market, neutralising all Bull points and resulting in an entire absence of support. With the exception of Baku Ordinary, which have risen 6d. per share, all changes that have taken place in Oil Shares are of a downward character, although fortunately, depreciations are not very extensive except in the case of Schibaieff Preference, which have declined about $\frac{3}{4}$.

On Monday week the list of prices given in our last report weakened, Schibaieff Preference losing $\frac{1}{4}$ at $3\frac{3}{8}$ - $3\frac{5}{8}$, Russian Ordinary 6d. at 9s. 6d. to 10s. 6d., while Russian Debentures were a wider price at 94-97. With Wednesdays dealings European Preference altered to 84-87, and Spies fell $\frac{1}{2}$ to $\frac{3}{8}$ - $\frac{7}{8}$, losing a further $\frac{1}{2}$ the following day at $\frac{1}{8}$ - $\frac{3}{8}$, while Baku Preference fell 6d. at 6s. 6d. to 7s. 6d. The only other change for that week was a sharp reaction in Schibaieff Preference, which left the price no better than $2\frac{3}{4}$ - $3\frac{1}{4}$.

Last Monday sales of Russian debentures carried the quotation down to 91-94, and on Tuesday, Spies fell to $\frac{5}{16}$ - $\frac{3}{8}$, but no other alteration occurred. Wednesday Spies weakened still further to $\frac{3}{16}$ - $\frac{3}{8}$, and on Thursday the advance of 6d. per share in Baku Ordinary already alluded to took place, the quotation closing firm at 3s. 9d. to 4s. 3d.

At the end-June settlement, which commenced on the 26th ult., Contango Rates were about normal. That reacted in the case of Oil Shares being about 5 per cent to 7 per cent., while making up prices shewed little alteration from those fixed at mid-June. Californian Oilfields at $5\frac{1}{8}$ gained $\frac{1}{4}$, and Shell Transport Ordinary at $3\frac{1}{2}$ improved $\frac{1}{8}$, but Schibaieff Ordinary fell $\frac{1}{16}$ at $\frac{7}{16}$, and the Preference $\frac{1}{8}$ at $3\frac{3}{8}$, Russian Ordinary losing a similar amount at $\frac{1}{2}$, while the Preference lost 2s. 3d. at $\frac{9}{16}$. Anglo-Russians at 2s., Baku Ordinary at $\frac{3}{16}$, Preference at $\frac{3}{8}$, and Spies at 8s. 6d. were unaltered.

Latest quotations of Oil Shares will be found on page —.

The Santa Fe Railway has tested a large area of land in Ohio in a quest for crude oil, and now have three wells making from 6,000,000 to 10,000,000 cubic feet of natural gas.

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MESSRS. NOBEL BROS., ST. PETERSBURG.

DETAILS OF THE PAST YEAR'S WORKING.

The annual meeting of shareholders of Messrs. Nobel Bros. was held in St. Petersburg on the 6/19th of June. There were present shareholders representing 9,436,000 roubles of the share capital, which altogether amounts to 15,000,000 roubles. The largest shareholders now are: Mrs. E. K. Nobel, holding 1,246,750 roubles; E. L. Nobel, holding 909,000 roubles; and G. Wawelberg, holding 825,500 roubles. The Volga-Kama Bank are the registered holders of 909,000 roubles' worth of shares, and the St. Petersburg Discount and Loan Bank 578,000 roubles. Of other substantial shareholders present may be mentioned:—Mr. N. V. Spiridonoff (185,000 roubles), S. G. Stcheglovitoff and P. O. Gukassoff.

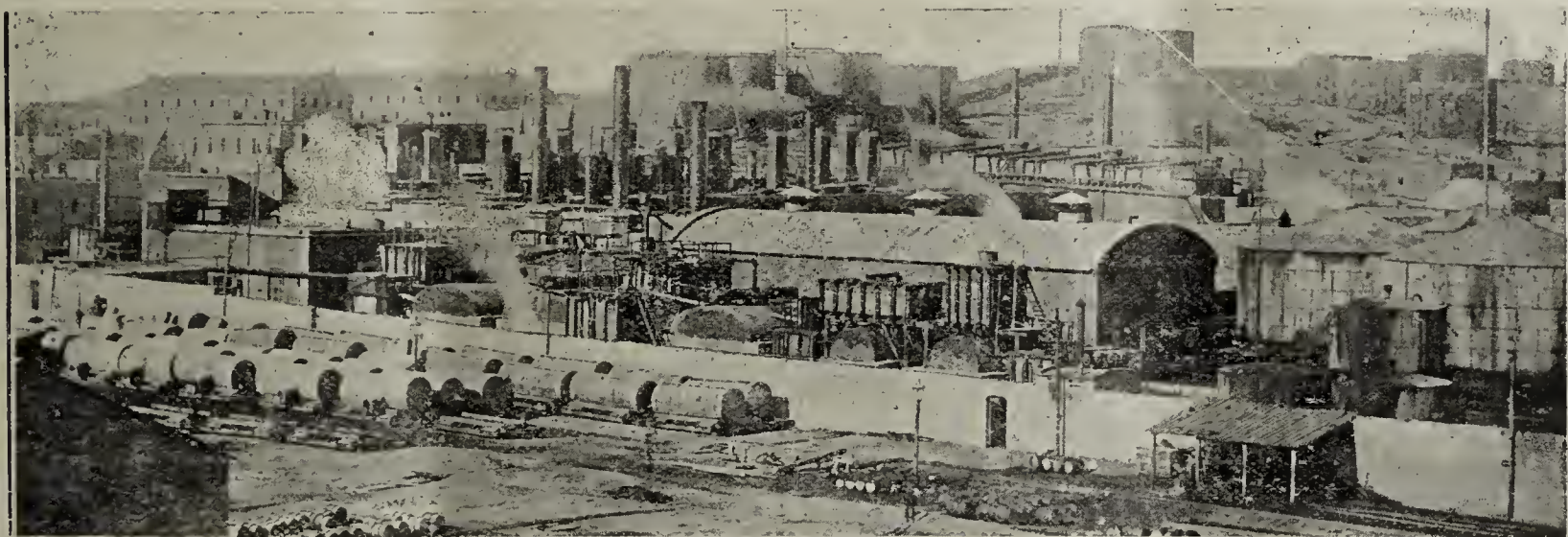
Mr. E. L. Nobel was elected to the chair.

The report and accounts submitted to the meeting shewed that the company produced and bought altogether

2,055,578 roubles; the stock of petroleum products and sulphuric acid on the 31st December, 1905, stands at 20,207,597 roubles. Thus the total revenue is 97,983,009 roubles. Deducting from the total expenditure, amounting to 93,079,262 roubles, we get a gross profit for the year of 4,903,747 roubles.

In the expenditure are included: 688,223 roubles written off the value of Russian and foreign securities and expenses in realising the company's five per cent. debentures. For doubtful debts were written off 151,466 roubles. Expenses caused by the Baku disturbances stand at 198,661 roubles; but apart from this the balance sheet shews that the insurance fund has been reduced by 1,900,000 roubles against the preceding year, although a sum of 150,000 roubles was added to it out of last year's profits.

The gross profit of 4,903,746 roubles is to be applied



VIEW OF THE FIRM'S KEROSENE DISTILLERY.

92,880,898 poods of crude oil. The cost of petroleum products bought is put down at 26,236,354 roubles. The production of crude oil on the company's own properties has considerably decreased, being only 46,000,000 poods, against 70,000,000 poods in 1904. The prices of petroleum products, in accordance with the fluctuation in output, were last year subject to very great fluctuations. After reaching their highest point in the autumn, they fell again towards the close of the year.

The amount realised by the company by the sale of petroleum products amounted to 71,929,610 roubles, which includes 34,454,462 roubles realised for 34,824,730 poods of kerosene and 28,345,882 roubles for 106,419,172 poods of kerosene. Adding to this the interest on investments, current accounts and profits from foreign enterprises, amounting altogether to 579,003 roubles, further rent for hire of the company's tank waggons 623,000 roubles, and sundry items of revenue, we find that the total revenue for the year was 74,203,980 roubles. The cost of petroleum products used as fuel at the company's establishments, and supplied for fuel purposes on the steamers chartered by the company, is put down at 1,505,854 roubles; the cost of the crude oil supplied to refineries under contract for treatment,

in the following manner: Amortisation of properties, 1,479,422 roubles; debenture sinking fund, 453,245 roubles; leaving a net profit of 2,971,076 roubles. Out of this net profit, 489,477 roubles is to be paid as Government tax, and out of the balance of 2,481,598 roubles put to the reserve fund, 1,200,000 roubles is distributed as a first 8 per cent. dividend to the shareholders. The balance of 1,156,558 roubles still remaining is distributed in the following manner:—40 per cent. or 462,639 roubles as remuneration to directors, managers and employés; 600,000 roubles are distributed as an additional 4 per cent. dividend to the shareholders; making a total distribution of 12 per cent., or 1,800,000 roubles. The undivided balance of profits of 93,359 roubles is used to further strengthen the insurance fund.

The value of the securities held by the company at the end of the year, according to their market price, was 6,459,776 roubles, including Russian securities, 2,485,364 roubles (of a nominal value of 3,032,430 roubles), and foreign, 3,972,402 roubles. In the last-named sum are included the shares of the Austrian Co., of a nominal value of 270,000 kronen; the Deutsche-Russische Naphta Import Gesellschaft, 2,330,000 marks; the Société Anonyme d'Armements d'Industrie et de

Commerce, 4,111,000 francs; and the share in the English petroleum distributing and shipping companies, £133,312 sterling. The market value of the foreign securities is not indicated in the balance sheet, but Russian Government 4 per cent. stock is valued at 80½. Among the Russian private shares are 4,250 shares of the Volga Steamship Co of 10 roubles each, and one 100 rouble share of the Ferghana Petroleum Co., valued at 400 roubles.

The Chairman, in proposing the adoption of the report, explained that the production of crude oil on the company's properties had considerably declined. On the other hand, the company during the past year had extended their operations in purchasing the oil of other firms and distributing the same throughout Russia, to which was to be ascribed the increase in the profit by 900,000 roubles.

The export trade of the company during the year had decreased. The total quantity exported in 1905 was 55,000,000 poods, against 100,000,000 poods in 1904.

In reply to a question, the Chairman explained that this decrease was the direct result of the increased production in the United States, Galicia, and Roumania, which countries were now offering severe competition to the company. At the same time the increase in the rate for delivering the oil from Baku to Batoum from 16 to 19 copecs per pood was the principal obstacle in the way of the development of the export trade. The participation of the company in foreign distributing companies had in the past year not justified the hopes put on it. It could not, however, be considered entirely fruitless, and there was every reason to believe that it would regain its importance and value in the future.

The total loss suffered by the company as a result of the Baku disturbances was 600,000 roubles, and 150,000 roubles were written for bad debts.

The meeting unanimously approved of the report and balance sheet, and a vote of thanks passed to the directors and employes concluded the proceedings.

LIQUID FUEL FOR THE TRANS-SIBERIAN RAILWAY.

Reports have recently appeared in the Russian press as to the proposed adoption of liquid fuel on the eastern section of the Trans-Siberian railway, and in connection therewith the proposed development of the oil fields on the island of Sakhalin.

With the loss of part of the coal supplies in the Far East, and in view of the restricted output of coal in Siberia, where it is obtained in very primitive ways, there is every possibility of petroleum successfully competing with coal, but the supply of oil will probably come not from the east but from the west, *i.e.*, not from Sakhalin, but from Baku.

The existence of oil fields in Sakhalin has been known for a long time, and attempts have been made to work the deposits, but there the matter stopped.

Apparently, this oil field belongs to that class which will only be developed by some future generation. In this category can be included, apart from Sakhalin, the Petchora oil fields, those on the shores of Lake Baikal,

and some in the northern Caucasus. In our own days these fields can scarcely have any industrial importance. On the other hand, Baku fuel oil has already reached the borders of Siberia, the Samara-Zlatoust being now run on liquid fuel. It is, therefore, quite feasible that it should penetrate further along the Siberian line. For the supply of the Far East it will be necessary to have recourse to the sea route from the Black Sea to Vladivostok.

There is another and perhaps the most natural solution of the difficulty, and that is to get the fuel oil from California or the Borneo oil fields, from which place a cheap and abundant supply could be obtained more conveniently than from the Black Sea, but this is at present debarred by Russia's strictly protective policy.

THE ILLINOIS OIL FIELD.

There is great activity at present throughout the entire Illinois oil field, and operations are still increasing. The pipe line is now tanking close to 9,000 barrels of crude daily. About 6,500 barrels of this is shipped by tank cars, and the balance put into the new storage tanks, of which there are four 35,000 barrel tanks completed. The six-inch line is completed from the tank farm to the loading rack at oil fields, and also to the new rack just completed near the tank farm.

The oil in the active Union township pool in Cumberland county is being pretty well taken care of, and arrangements are being perfected to lay lateral lines to the southern end of the field in Crawford county at once. The main line from Casey to Montpelier, Ind., will be started within the next few weeks, and the line will be rushed through to completion.

The greatest drawback in the field just now is the water proposition, as water appears to be more valuable than the crude. Many drilling wells are shut down a part of the time owing to the scarcity of water to feed the boilers. There are no idle strings of drilling tools around Casey at the present time, and the figures for May will more than double those of April.

The well drilled by Treat and Crawford in their No. 2 on the Dr. Birch farm, section 14, Oblong township, Crawford county, is without a doubt the largest producer yet drilled in the Illinois field, and leads many to believe that the south end of the field will stand very high. The well, while no gauge could be taken of it, was estimated by the most prominent and well-versed oil men at better than 1,000 barrels. This well is close to a mile south-east of the initial well on the Shire farm that opened up the Oblong pool. Finley, Hughes and Co. have drilled in No. 2 on the C. Shire farm, section 10; it is credited with being good for 300 barrels. The Crescent Oil Co. also has a gusher in No. 1 on the C. Baldwin farm, section 17, as it had a production of 240 barrels. These are the wells that are attracting the attention of the oil men from far and near.

An extraordinary general meeting of the shareholders of the Societe Francaise des Petroles, and of the Societe Francaise des Petroles de Montechino, was held in Paris on June 7th, at which it was resolved to wind up both these companies and transfer the assets to the Societe "Petroli d'Italia."

THE BAKU RUSSIAN PETROLEUM COMPANY, LIMITED.

ANNUAL MEETING OF SHAREHOLDERS.

The annual meeting of the shareholders of the Baku Russian Petroleum Co., Ltd., was held on Wednesday at Winchester House, E.C., the chairman of the company—Colonel Ivor Philipps, M.P.—presiding over a full attendance of directors and a large body of shareholders.

The Secretary read the notice convening the meeting, after which the annual report of the directors was taken as read. This report was as under:—

As already reported in detail by circular, addressed to the shareholders on the 2nd December, 1905, your company sustained very heavy losses, and the production of crude oil was most seriously affected by a succession of strikes and political disturbances which occurred during the year, culminating in a terrible massacre of workmen and a large destruction of your property by incendiary fires.

The gross production of crude oil from the 1st January, to the 21st August, 1905, o.s., counting only the days when it was possible to work full time, averaged 401,849 poods per week. In consequence of the damage to property and the scarcity of workmen and new material, the company only obtained an average production of 141,957 poods per week from the 22nd August to the 31st December, 1905, o.s., the total for the year amounting to 15,728,253 poods, as compared with 26,223,207 poods obtained in 1904.

The boring work was also greatly interfered with, the total depth bored during the year amounting to 1,310 sagues, as compared with 2,920 sagues in 1904.

The balance to the credit of the profit and loss account for the year 1905, before charging depreciation, is £55,331 3s. 1d., which has been carried to losses by fire and disturbances account.

The company's wells not having recovered the full productivity shewn previous to the strikes, and the completion of new borings having been so unfortunately delayed, the output at the present time compares unfavourably with the year 1904. Other companies at Baku are evidently suffering from the same causes, as the official figures published for the first four months of this year shew a decrease in the total production of the oil fields of about 30 per cent., compared with the average production in 1904.

During the current year 1906 the board have renewed the lease of the remaining one-eighth of plot 173 Saboontchi, referred to in last year's report.

Subject to the formal approval of the Russian authorities, the boring rights on plots 83 and 84 Saboontchi, referred to in the directors' report for the financial year 1899-1900, have been sold. There are no wells on these plots, and no capital expenditure has been incurred on them since the surface leases were taken over from the vendors in 1898.

As already referred to at the extraordinary general meeting held on the 9th April last, Messrs. Wm. France, Fenwick and Co., Ltd., have resigned their appointment as agents of the company.

Mr. C. F. H. Leslie and Mr. Stuart James Hogg resigned their seats on the board in March, 1906.

Arrangements have been made, in accordance with the promise given to the shareholders, for the appointment of additional directors. The following gentlemen, viz., Mr. Robert Barber, Mr. James Booth, Mr. Alfred H. Drew, Mr. Charles Sinclair Watson, and Mr. John Bowring Wimble, have been appointed to the board, subject to the appointment being confirmed by the shareholders at the annual meeting.

Mr. James Booth and Mr. Charles Sinclair Watson were nominated by the committee which represented certain shareholders in the north of England. The other three gentlemen have been nominated by various shareholders who have a large interest in the company.

The above arrangements provide for all sections of shareholders being represented on the board, and have

put an end to the agitation which has been proceeding with regard to the administration of the company.

The board recommend the shareholders to confirm the appointment of these new directors, and to re-elect Mr. C. H. Moore, the director retiring by rotation, who is eligible for re-election.

The board report, with much regret, that Mr. H. N. Gladstone, in pursuance of the announcement which he made to the shareholders at the meeting held on the 9th April, will retire from the board upon the confirmation by the shareholders of the election of the new directors.

In moving its adoption, the Chairman said that inasmuch as he had had the opportunity of addressing the shareholders on several occasions since the last annual meeting, he trusted that on the present occasion his address would not be a lengthy one. With regard to the balance sheet, the first item to which he would call their attention was the item of loans, £125,000. Those were at the same figure as the preceding year, and the loan had been secured by an undertaking to issue £125,000 six per cent. debentures when called upon. Since that time the holders had called upon them to issue the debentures which had been issued. The other loan figuring in the balance sheet at £30,000 was secured upon the materials in store, which stood at £95,000. That loan was a short period loan, but it had now been renewed for another short period.

Coming down to the losses by fire in August and September last, the Chairman said they had already carried forward 1,200 to the credit of that account. The board, however, had had under consideration how to treat that important question, and they had decided to transfer the balance of the profit and loss account of 1905 to that account, making it about £56,500. From that account they had so far renewed a considerable portion of the damage done, which portion was represented in the balance sheet at £27,000, so that there was still standing to the credit of that account a sum of £29,000, which would be and was being spent at the present moment in restoring their property.

Turning to the credit side of the balance sheet, they would observe that the capital expenditure during the past year was £48,300. That was, of course, less than the board originally intended, and was brought about owing to a cessation of boring work on account of disturbances. That had been added as was customary to the capital account less a proportion of leases written off to the amount of £1,800. The one large item on that side of the balance sheet was that of the materials in store which was placed at £95,000. At the annual meeting last year the shareholders would remember that he told them the board were doing all they could to reduce that amount, and consequently no doubt some would see that large figure with some amount of surprise after what he had said, for it had increased instead of having decreased. Efforts were made to reduce that amount, and, as a matter of fact, a considerable amount of the stores were used and some were sold because they considered their stock too great. But during the year a considerable quantity of casing and tubes ordered in 1904 were delivered, while, owing to the cessation of boring work, a large amount of casing for the wells was not required, and therefore there had not been that withdrawal from the stores there generally was. At the same time, also, owing to the destruction on their property, a larger amount of timber and other kinds of materials was necessary in order that the derricks might be restored. This extra stock had to be purchased, and on January 1st a considerable amount of those stores had not been used, and thus the increase noticed under that heading was brought about.

Looking at the profit and loss account, the first item which called for comment was the purchases of crude oil, including Government royalty oil. During part of

the time they had the contract with the Russian Co., they purchased crude oil in the market, and it was satisfactory to say that they were able to purchase that oil at a lower rate than that at which they supplied it to the Russian Co., and about £17,000 was on that account.

The shareholders would notice that the expenses generally had decreased. He could not say that that was very satisfactory because it meant that their work had been stopped. As regarded the administration expenses in Russia and London, those of course went on whether work was stopped in Russia or not. The expenses in London had been increased during the year, that being on account of the arbitration with the Russian company. That money, however, he thought well spent, and they got very good results from it.

But the question they were all interested in was as to the future. Owing to the disturbances, their programme had been hampered, but they were now pushing on with all possible speed with the boring of new wells, the deepening of others, and the restoration of the wells which were damaged last year. At the present moment they were boring 12 wells in Bebe-Aibat, and a similar number at Balakhany and Saboontchi. Of the wells at Bebe-Aibat, four were nearly completed and eight at a shallow depth were expected to be complete within four to twelve months.

As to their production, that was undoubtedly unsatisfactory. That morning they had received a telegram from their manager—Mr. Urquhart—saying that he hoped to give them more satisfactory results when the new wells were in operation. They were, however, again troubled with strikes and labour troubles. As those present possibly knew, there had been a strike on the Bibi-Eybat Co.'s works, there was also one at Mantascheff's, and the workmen at the Bebe-Aibat mechanical shops had come out on strike yesterday. Although further strikes were probable, however, it was not feared that they would become general, though the situation was difficult. Their company was doing all they could to push their boring programme forward, and now they only required peace in order to bring their production to a figure at which the company could make profits. He thought they were all indebted to their local staff for the way in which they had stuck to their duties through a most difficult period—a time of danger—and for the energy they were putting forward in restoring the damages on their property.

With reference to the new members on the board, he desired to say that after much consultation, and having met certain gentlemen who represented large blocks of shareholders in the north of England, and in fulfillment of the promises he had made, the board had appointed five gentlemen as directors. These were: Mr. Barber, whose name was put forward by two large shareholders, and who had the support of many others, and who had taken a great interest in the meetings of the company; Mr. Booth, who was nominated by shareholders from the north of England, and who was chairman of the Yorkshire Iron and Coal Co., and vice chairman of the Halifax Commercial Bank; Mr. Drew, who was the chairman of the committed selected and appointed by the shareholders of the company; Mr. Watson, of Liverpool, whose name was also put forward by a large body of shareholders in the north of England; and Mr. Wimple, of Messrs. Bawring and Co. Those gentlemen had been appointed to the board upon the understanding that the general meeting of shareholders confirmed the appointment. They were all men of good commercial standing; he welcomed them as directors, and hoped the shareholders would approve of their action. While on that subject he had to mention that Mr. H. N. Gladstone, who had been for a long time director of the company—and a most valuable director—had resigned. Mr. Gladstone would have left the board some time ago had it not been at the speaker's personal request that he should continue, but in accordance with what Mr. Gladstone had told the shareholders, he would now resign now that a businesslike body of men were appointed to the board.

Dr. Whitty said that on behalf of the committee with

which he had been associated, he wished to express their satisfaction that an amicable arrangement had been arrived at. He assured them that no one more than the members of the committee regretted the necessity for the agitation, yet no one could gainsay the fact that it had been productive of much good. The agitation had achieved, for the first time in the history of the company, direct representation on the board of the shareholders themselves. As the shareholders would no doubt know, there had been a certain amount of expense in connection with the agitation, and inasmuch as the whole of the shareholders would join in the benefits which accrued from that agitation, it was thought reasonable that they should also share in the expenses. He, therefore, moved that the meeting authorise the directors to pay the reasonable costs and expenses of the committee of shareholders.

Dr. Dvorkovitz said he was very pleased to express satisfaction at the action of the directors in allowing the shareholders to have representatives on the board. He could assure them that when he started the agitation, eight months ago, he did so with great reluctance, for there were none who more than himself honoured the name of Mr. Gladstone and his family. It had been a work of great labour and unpleasantness to take the action he had taken; but he felt it was time that those who were connected with the promotion of the company should allow the shareholders to have their own representatives on the board. Now, he did trust that the new board, representing the shareholders, and having only at heart the interests of the shareholders, would succeed. Personally, he felt on behalf of the shareholders that they had to thank Mr. Gladstone for having decided to resign, for had he not voluntarily given away his rights they would not have been able to have the new board. That new board might be, to a certain extent, reaping the benefit of what had been done in the near past. Undoubtedly they came into office when prices for crude oil were very high. They came into office when a certain agreement contrary to the interests of the company had been cancelled, and practically the company was now free from any agreements, from any future sales, and so on; and with proper management, and realising the market price of the oil being produced, undoubtedly there was a big future before the shareholders in the company. He hoped the representatives of the shareholders would henceforth work amicably together, and that all strife on the board would be eliminated. With regard to the question raised by Dr. Whitty as to the payment of the expenses of the agitation, he had to say that when he started the agitation he made it clear that he was a professional man. He had incurred very great expense, and as the committees only came lately into the field, he was fighting the battle for the shareholders for four or five months. He felt confident, therefore, that the money he had spent would be returned to him; and if it were not decided to pay it from the funds of the company then he should have to appeal to each shareholder individually.

The Chairman explained that with regard to Dr. Whitty's resolution the board were not antagonistic at all, and if on the advice of their solicitor, the company could legally pay the expenses, then it was purely a question whether the shareholders agreed.

After a deal of discussion, the motion was put to the vote, and lost.

The meeting then confirmed the appointment of the new directors, after which, Mr. Holzaphel remarked that one of the points upon which the committee of agitation felt strongly was that as to the employment of Mr. Urquhart as their manager. He was manager also of three other companies, and it was plain to everyone that he could not devote a great portion of his time to the affairs of their own company. Then the question of reorganisation of the company was a matter which the committee thought it well to be gone into as early as possible.

The Chairman said the board would take into consideration the points raised by Mr. Holzaphel.

A vote of thanks passed to the chairman, on the motion of Dr. Dvorkovitz, concluded the meeting.

THE BIBI-EYBAT PETROLEUM COMPANY, LIMITED.

ANNUAL MEETING OF SHAREHOLDERS.

The annual meeting of shareholders of the Bibi-Eybat Petroleum Co., Ltd., was held at the offices of the company on Thursday week, Mr. J. Annan Bryce, the chairman of the company, occupying the chair.

Mr. R. M. Allan, the secretary of the company, read the notice calling the meeting, after which the annual report of the directors, which appeared in the last issue of the REVIEW (page 410), was taken as read:—

The Chairman, in moving its adoption, said that as would be gathered from the report, the results of the past year's working had not been so good as the directors anticipated would be the case.

Since then there had been very serious disturbances, and in December last the directors issued a circular telling the shareholders the position which had resulted. In the months succeeding the disturbances in August, when those accounts were received, the actual results had worked out even worse than was anticipated at the time the circular was issued, and the result was that they had received from the Russian company a profit of something like £10,000 only, instead of the very considerably larger sum which at one time they expected. Since the end of the year the production had considerably improved, and for the first four months of the year it had very nearly reached the rate of 1,000,000 poods a month, which, under the circumstances, they considered a satisfactory condition. But unfortunately since the report was issued, they had again been faced with a condition of disturbance and turmoil in Baku. At present there were signs of a strike not only in their own oil fields, but in others, but they were doing their best to get the producers to act together and to shew a firm front to the demands of the workmen. He personally believed that when the strikes began in July, 1903, the condition of the workmen was such as to entitle them to demand improvements in their position; but in the course of the three years which had since elapsed a great deal had been done to improve their position, and at present their conditions of life were not only fairly satisfactory, but their wages were quite as good as they could expect to have, if not better. They did not, therefore, feel that at present there was any justice in the further demands which the workmen were now putting forward. He trusted that the threatened strike would be averted, and it must be remembered that in so far as disturbances were concerned, there was less probability than formerly of serious damage resulting, because the Russian Government recognised the importance of the trade of Baku, not only to itself, on account of the income it received from it, but to Russia generally, from the fact that the industries and the transport of Russia depended to a very large extent upon the fuel which was produced on the oil fields of Baku and Grosny. The importance of the production of those fields was very much greater now than it was some years ago, so that the Russian Government could not afford to leave the oil industry to take care of itself, and it had in consequence, since the last disturbances, put upon the fields, both of Grosny and of Baku, a very much larger protective force than existed there when the disturbances began three years ago.

As they all knew, the price of oil had been very high during the last few months, but they, who had sold—as every solid, producing concern ought to sell—to a very large extent forward, had not naturally been able to get the full benefit of those higher prices; and he might say that he did not consider the high prices which were at present ruling were an unmixed advantage to the industry, because they tended to diminish the field of consumption of the oil for fuel purposes and to make the competition of coal a greater element than it was when the prices of oil were at a more moderate level. One of their directors, Mr. Von Ofenheim had been twice during the year to Russia, and the speaker would ask him to say something

with regard to the position of the industry and the prospects generally on the fields. Personally he believed that if they could surmount those constantly repeated industrial troubles, and if a stable condition of affairs established itself, they would be able to work quietly on and obtain an excellent production: and if they did so the company would speedily get into a better position, provided prices maintained themselves at a moderately good level.

He then proposed that the report and balance sheet for the past year should be adopted.

Mr. W. Ritter Von Ofenheim, in addressing the shareholders, said that the position of director of an oil company was not a bed of roses last year, or, at least, if they were roses, they had very many thorns in them. Beginning in December, 1904, they had a general strike. All work was at a standstill, and the wells and the whole business completely disorganised. This was followed in May by a political strike of the workmen, which lasted something over a fortnight. They started work in January, and had then to face the enmity of the elements, because during more than eight days snow-storms, which generally were unheard of in Baku, entirely again brought work to a standstill, damaging the derricks and installations and throwing them back in their efforts. After starting again in February, the first big massacres between Armenians and Tartars took place. Terror was spread over the whole town and the oil fields, and again work was disorganised. They started work once more, only to be again disturbed by the great fires which occurred about the 20th August (o.s.), and which destroyed nearly three-fourths of the Baku oil fields. He went there immediately on hearing that disturbances had broken out, and, of course, he found everybody had become rather disheartened. It was quite natural that such a state of things must get on the nerves of everyone. Nevertheless, their whole staff, with great pluck, set to work, but it was impossible to resume operations again in consequence of the general state of affairs before October, and no firm could start work before that time. Their firm started in October. Then they had another political strike and another massacre at the end of October, and smaller political strikes in November and December. That under such circumstances work could not progress satisfactorily was more than natural. He might say, on the other hand, that their company was the first perhaps to recoup their full production again in the fields, and he was very sorry that the last strike, to which the chairman had referred as a partial one only, though it might at any moment develop into a general one—which they hoped it would not—had again stopped their production for some five days. The chairman had explained quite rightly that they had arrived at the limit of concessions to their workmen. He desired to say that the workman on their fields and in Baku in general was very well treated. A workman who was in any way a skilled labourer received about 2.50 to 3 roubles per day—that was to say, from 5s. to 7s.; besides that, he got free lodging, free fuel, and free light. Baths were provided for him, he had halls to assemble in and a theatre, so that the men could always have some amusement. In fact, they were in every way well looked after, and as far as he had come in contact with the workmen in Baku they were very good workers, and in the majority of cases they were conscientious and very good natured. Only a small minority had too far-going socialistic and, perhaps, revolutionary tendencies, and they terrorised the majority. He hoped the time would not be far distant when the majority of the workmen would see that to follow the lead of the terrorists, as they called them there, would do them harm. As to the outlook for their company, they still hoped for much better prospects in the future; and there was one thing which might be a comfort to us; it was that financially they were independent—they had provided for all the extra expenses, etc., out of their own means, and they still had substantial funds in hand—so that they might be able to face every emergency.

The motion was then put and carried unanimously.

The Chairman then moved the re-election of Mr. Von

Ofenheim as director, this being seconded by Mr. Antrobus, and unanimously agreed to. The auditors were also unanimously re-elected.

The Chairman then proposed that a hearty vote of thanks should be given to Mr. Mancho and his assistant, Mr. Kotovsky, and the whole staff at Baku for their services during the year. It would have been gathered from what had been said that the position of the management at Baku during the past year had been one of great difficulty and great anxiety, requiring exceptional tact, but Mr. Mancho and Mr. Kotovsky had shewn this quality in an eminent degree, and the fact that the company had experienced so little damage during the three years in which the disturbances had been prevalent was to be attributed to the remarkable power which both of these gentlemen had to understand the feelings, wishes and sentiments of the workmen, and satisfy them as far as was possible without producing enmity and hostility.

The vote was seconded by Mr. Von Ofenheim and carried with acclamation, a similar vote to the chairman terminating the proceedings.

PRELIMINARY FIGURES OF ROUMANIAN PRODUCTION IN APRIL.

The production of crude oil in Roumania in April, according to preliminary figures just published, amounted to 56,682 tons, as against 66,496 tons in March. The production of the different fields was as under:—

	March.	April.
	Tons.	Tons.
Prahova District—		
Bustenari	39,891	37,602
Campina-Poiana	7,441	12,918
Moreni	10,877	—
Baicoi-Tinta	4,342	5,254
Other Fields	658	212
Total for Prahova ..	63,199	55,986
Dambovitza District ..	1,462	—
Buzeu District	1,046	—
Bacau	794	696
Total	66,496	56,682

It will be observed that the April figures are incomplete, and do not include the production at Moreni, Buzeu, Bacau, and of a number of the firms in other fields. The complete figures for April are certain to be larger than those for March. The most noteworthy fact is the substantial increase in the output at Campina, due to the completion of new productive wells.

The production of the principal firms in April, as compared to March, was:—

	April.	March.
Steaua Romana —		
Bustenari	9,237	9,732
Campina	9,298	6,188
Baicoi	3,959	2,919
Sarata (Buzeu)	—	1,023
Other Fields	345	348
	22,839*	20,210
Bustenari Co	10,351	10,568
Telega Oil Co.	5,010	6,349
International Co.	2,459*	3,357
Campina-Moreni Co. ..	2,556*	6,434
Moreni Co.	—	2,730
Trajan Co.	2,205	2,171
Aquila Franco-Romana ..	1,051	1,347
Romano-American	—	1,938*
Secleanu Bros.	944	998
Colombia Co.	936	977
Grigorescu and Vladescu ..	563	950
Arnheemsche Petroleum Co. ..	904	811
Olandeza Romana	1,090	905

[The production of the firms marked by an asterisk (thus *) is incomplete.—ED. P.R.]

DETAILS CONCERNING THE CALIFORNIAN OIL INDUSTRY.

A number of interesting details are given in the latest issue of the *Pacific Oil Reporter* concerning the Californian oil industry. It appears that the production of the Coalinga field for the first half of May amounted to 350,975 barrels, of which 263,900 barrels were shipped by pipe line, and 40,850 by rail, and 46,225 barrels put into storage. On May 15th there were 145,775 barrels of oil in storage, against 99,550 barrels on May 1st. The unusual accumulation of storage oil was caused by the temporary shutting down of the Associated Oil Co.'s Monterey pipe line on account of damage by the earthquake on April 18th. On May 15th there were 236 wells producing, 28 wells shut down, 10 derricks up, and 15 drilling wells, of which only seven are actually at work. There were six wells completed during the first half of May, with no failures. In addition to the above figures of storage, the pipe line companies have 111,000 barrels in receiving tanks awaiting movement.

There was approximately 400,000 barrels of storage oil in the Santa Maria field on May 15th, nearly all of which is held by the Union Oil Co. of California. There are 80 producing wells, 36 drilling and three shut down. There have been six failures in the field since January 1st last.

The final deal in the consummation of the purchase of the Newlove Estate Ranch has been made, and this valuable oil property is now added to the large subsidiary holdings of the Union Oil Co. With the exception of the Hartnell gusher, all the large oil wells have been located right around the Newlove Ranch border line, which has therefore been proven on two of its triangular sides. The price paid for this land was about \$400 per acre. For the proven part of the territory the price is very cheap, but the eastern part of it has yet to be proven, though it is reasonable to presume from the spread of the field or the geological lay of the land that good wells will be found. The Union Oil Co., unlike the recruit, has confined its drilling to the Central field, and only occasionally tried the westerly field. It has found exceptional success in the main Santa Maria field.

Operations in the Kern county field are practically at a standstill. An average of a little less than 1,000,000 barrels per month is being produced; shipments by rail and pipe line vary from 850,000 to 950,000 barrels per month, leaving a small surplus going into storage. The stocks in the field have not declined or increased to any noticeable extent since the first of January this year.

No company in the field is adding to its production except in cases where contracts call for a certain production, and the natural decline of the wells has brought their production down to less than that demanded in the terms of the contract.

Liquid Fuel in Palma.—The Vice-Consul at Palma reports that an increase of 106 tons is to be noted in the importation of crude petroleum at Palma during the year 1905, the fuel now being used in several industries that formerly employed other fuel.

THE BAKU PETROLEUM ASSOCIATION.

ANNUAL CONFERENCE.

The twenty-second annual conference of the Baku petroleum producers terminated on the 15th of June. In addition to the questions dealt with at the first five sittings, particulars of which were published in the REVIEW, a number of important matters were also discussed.

A proposal was submitted by Mr. Gukasoff to form a petroleum export company, to which concern it would be advisable to transfer the control and working of the Baku-Batoum pipe line. After listening to a comprehensive report on the question by Mr. Istomin, who, with the aid of figures, made clear the almost complete collapse of the Russian petroleum export trade simultaneously with the growth of the petroleum exports from America, Galicia, and Roumania, it was resolved to send a petition by telegraph to the Ministry of Finance to reduce the Baku-Batoum rate for all petroleum products to 10 copecs per pood.

The question raised by Mr. Gukasoff, in view of its important and complicated nature, was handed over to a committee to report on it to the next conference, which will take place in November.

With regard to the question of the small petroliferous plots, which formed a topic of discussion by various Government departments and special committees during the last eight years, it was resolved in accordance with the report of the special committee, appointed by the conference, under the presidency of Mr. Djunkovski, Member of the Viceroy's Council, and consisting of Messrs. Lahn, Eklund, Gukasoff, Feigl, Ogulevitch, Pappe, Vatchiantz, Kniazeff and Paronian, to recommend the leasing, without auctions, of: (a) Plots held on lease by private persons for a considerable time; (b) plots of less than one dessatine (2.7 acres) situated between producing plots; (c) plots up to one dessatine adjoining producing plots of small area; (d) plots held on lease for surface use by petroleum producers, and where there are industrial structures, such as pipe lines, workshops, etc., serving other plots; (e) plots which have been held on lease by private persons before their expropriation from the use of the peasants, where there are likewise pipe lines or other industrial structures.

The question of the insurance fund for workmen and employés of petroleum enterprises was also discussed. It was pointed out that in view of the necessity of modifying the statutes, in accordance with the changed conditions, that has been entrusted to a temporary committee consisting of Messrs. Lianozoff, Gukasoff, Gavriloff, Brailovsky, and Ogulevitch, who will report to the November conference.

The question of the working of the oil field telephones was raised by Mr. Pappe, and for three days was the subject of stormy debates, it being eventually resolved that it was both desirable and within the rights of the conference to obtain the working of the telephone system to and between the oil fields, which are situated about 12 miles from the town.

Mr. Gukasoff energetically insisted on the necessity

of petitioning the Government to hand over the working of the oil fields telephone system to the council of the Petroleum Association, pointing out that for the rental for the oil fields telephones, which are more numerous and still urgently needed, it was proposed to retain at the rate formerly fixed by the Gustav List monopoly, namely, at 250 roubles per annum, which was excessive. This view was supported by Messrs. Ogulevitch, Pappe and Kniazeff, who all insisted on the telephone system being managed by the council of the association. The council, however, in the persons of Messrs. Feigl, Tagianosoff and Paronian strenuously declined to undertake the charge.

The resignation of the chairman of the council of the association, Mr. Gukasoff, who was elected a member of the State Council, and the retirement of Mr. Hagelin from the council of the association, was considered. Mr. Pappe, in a lengthy speech, dwelt on the valued services rendered to the association by the two gentlemen, and proposed their election as honorary members of the council of the association, which was agreed to. At the suggestion of Mr. Ter Akopoff, it was resolved to found a scholarship in the name of Mr. Gukasoff, and at the suggestion of Mr. Lianozoff, a scholarship in the name of Mr. Hagelin, both for the benefit of children of employés of the association.

Among the monies voted is a sum of 57,000 roubles for maintaining a Russian church, an Armenian church, and a Mahomedan mosque, and 650,000 roubles towards the cost of maintaining the newly-founded town governorship of Baku. The vote for the expenses of the council's representative in St. Petersburg gave rise to a very stormy debate.

Mr. Ogulevitch proposed that the post of representative should be abolished, as it was quite useless in its present form, and was even contrary to the interests of certain groups, which the present representative was unable or unwilling to safeguard. In a lengthy speech, Mr. Ogulevitch criticised the actions of the representative, which gave rise to difference of opinion. Upon the question being put to the vote, on the qualification basis, it was resolved to retain the representative.

The total income of the association in the coming year is estimated at 2,083,000 roubles. The expenditure is estimated to exceed this sum.

The necessity to re-organise the council of the association and revise the statutes of the association was agreed upon in view of the enormous increase in the budget (now on a level with that of the largest cities), and the necessity for adjusting the needs of the petroleum industry to the constantly changing conditions and circumstances.

Mr. Ogulevitch dwelt in detail with the necessity of also founding a union of petroleum producers, public storage and warrant branch, and re-organising the council of the association on the lines of the German Chambers of Commerce.

In order to prepare a scheme of re-organisation, and to

report thereon to the November meeting, a committee was elected to collaborate with the council. This committee consists of Messrs. Lianozoff, Ogulevitch, Pappe, Kniazeff, Gauden, Alibegoff, Khatisssoff, Nazarov and Makaroff. For the present it was decided to elect the council on the old lines. The council thus elected consists of: W. Feigl, chairman; members, Messrs. Eklund, Tagianossoff, Unanoff and Urquhart; candidates for membership: Messrs. Lessner, Aladjaloff and Gadjinsky.

With reference to the question of land held on surface use only and the illegal production of oil on such, it was resolved to leave the Government to deal with this matter, taking into account the work already done in this direction by previous meetings of the association and various committees.

The question of establishing residential settlements for workmen employed at Bebe-Aibat and the scheme for this purpose submitted by Messrs. Eklund, Khatisssoff and Urbanovitch, was the subject of much discussion.

Messrs. Feigl, Tagianossoff and Paronian insisted on the necessity of securing the plot of the Admiralty of 162 acres. Messrs. Khatisssoff, Ogulevitch and others preferably recommended the taking up of a Government plot of 405 acres.

Mr. Djunkovsky proposed, in view of the complicated nature of the land question and the length of time which it would take to arrange it, that both plots should be taken up for consideration. Mr. Ogulevitch opposed the establishment of two villages on economical grounds, as it would involve double expense on roads, restaurants, clubs, schools, etc.

At the suggestion of Mr. Lianozoff it was resolved to consider both plots, but take the Admiralty plot, only in case the other proving unattainable.

In regard to the question of lowering the flash-point of kerosene, and the report on same submitted by Mr. Gulishambaroff, representing the Minister of Finance, the meeting resolved, at the suggestion of Mr. Feigl, to hand it over for consideration to a committee of refinery engineers, who will report thereon to the November meeting.

AMERICAN PATENTS GRANTED.

Oil-Pump Motor.—Arthur J. West, Milwaukee, Wis.

In combination, an oil-pump having an oscillating operating shaft, a sleeve secured thereto, a lever-arm mounted in said sleeve, and extending in an approximately horizontal position, a weight adjustably slidable on the lever-arm, a sleeve also adjustably slidable on the lever-arm, a coil spring engaging the sleeve, a bracket mounted on the pump, and an eye-bolt adjustably supported by the bracket and engaged by the coil spring and serving as a means for adjusting the normal position of the lever-arm, the adjustment of the sleeve on the lever-arm serving to vary the normal tension on the coil spring, and the adjustment of the weight on the lever-arm serving to vary the degree of oscillation of said lever-arm which results from the inertia of said weight during a movement of the pump.

Oil-Pump Motor.—Willie S. Sherman, Milwaukee, Wis.

In combination with an oil-pump having an oscillating shaft, a sleeve secured on the shaft, a lever-arm mounted in the sleeve and extending upwardly, a weight adjustably mounted on the lever-arm so as to be movable nearer to or further from the shaft, leaf-springs mounted on the sleeve and bending away from the lever-arm, a bracket rigidly mounted on the pump, and having arms standing in the path of movement of the lever-arm, and set-screws adjustably threaded in the arms of the bracket to be engaged by the leaf-springs, and having jam nuts threaded thereon to hold them in their adjustments.

BRITISH APPLICATION FILED.

Process for the Solidification of Petroleum or other Mineral Oils, and the Transformation of the Solidified Hydrocarbon into Soap.—Victor Joseph Kuess, London. No. 14568 of 1906.

RUSSIAN AND ROUMANIAN NOTES.

The Caspian Society of Baku for the year 1905 has declared a dividend of 15 per cent.

Another Spouter.—A new well of the Romano-American Co. at Faget has commenced spouting, yielding about 600 tons of oil per 24 hours.

The Tcheleken-Daghestan Petroleum Company, in their fourth financial year 1905, incurred a loss of 43,572 roubles, against a loss of 36,234 roubles in 1904.

Gone to Blazes.—A crude oil tank of the Colombia Co. at Bustenari caught fire recently. The fire was localised, but unfortunately several workmen received rather severe injuries.

Activity in Roumania.—Great activity prevails in the Roumanian petroleum industry. The latest abundant discoveries of oil have induced even the most conservative people to take an interest in the petroleum industry.

The Crude Oil Demand.—Crude oil is in great demand in Roumania. The high prices which have now prevailed for a long time are stimulating the development operations to a remarkable degree. Prices are expected to advance further in view of the firm tone prevailing on all European markets.

The Moscow Petroleum Company, operating at Grosny, completed their ninth financial year 1905 with a loss of 110,670 roubles, against a loss of 125,777 roubles in the preceding year. The balance sheet for 1905 shews a total loss, exclusive of 1905, of 620,333 roubles.

The New Regulations issued by the Russian Customs Department provide that the inspection at the customs of petroleum oils destined for export can be carried out without its being necessary for an excise officer to be present. In case of any disagreement between the quality shewn by the tests and the transit certificate, verification tests have to be made.

Roumanian Shipments.—Shipments of petroleum products from Roumania were very brisk during the latter half of June. On the 18th June the Romano-American Co. exported by the Dutch steamer "Charlois" 3,629 tons of illuminating oil to Belgium; on the 19th the Steaua Romana shipped 464 tons of illuminating oil to Turkey; and on the 20th the Romano-American shipped 1,205 tons of illuminating oil, and Messrs. Desmarais Freres 3,188 tons of illuminating, by the tank steamer "Manhattan" to Italy.

Tenders for Liquid Fuel.—The results of the tenders for the supply of 5,000,000 poods of liquid fuel to the Orenburg-Tashkent railway have been announced. A contract for 4,000,000 poods has been given to Nobel Bros. at 37.75 copecs per pood delivered at Samara station, and another for 1,000,000 poods to the Ferghana Petroleum Co. The price of the latter firm is for delivery at Vannovskaia station. The actual price has not yet been announced, but it is probably based on a clear price of 25 to 28 copecs at the wells.

Partial Strikes at the Oil Fields.—Partial strikes have lately again become frequent at Baku. Demands of an economic nature have been presented by the workmen to the Caspian Society, Oleum, Mantascheff, and Schibaieff. There is not, however, now the same amount of solidarity among the workmen as on former occasions, and the strikes frequently collapse by the men themselves withdrawing their demands. The men of the Bibi-Eybat Petroleum Co. have gone out on strike, and on some other properties at Bebe-Aibat work is proceeding under military protection.

"Coming Events Cast their Shadows Before."—The large installations which are being constructed everywhere in Roumania, the numerous orders for materials and engaging of men, foreshadow the beginning of an era of extensive boring operations. The four principal groups operating in Roumania: The Disconto, the Deutsche Bank, the Standard Oil Co., and the Aquila Franco-Romana, are now so well organised that they are able to market very large quantities of petroleum products, and this fact enables them to concentrate their efforts on the development of the production.

The Neft Petroleum Company.—The Neft Petroleum Production, Storage and Trading Co., in 1905, earned a net profit of 329,865 roubles. It has been resolved to apply the same in the following manner:—Government tax, 23,433 roubles; remuneration to directors, 15,668 roubles; reserve fund, 16,493 roubles; special remuneration to workmen and employes, 15,165 roubles; and 210,000 roubles are to be distributed as a 6 per cent. dividend on the capital of 3,500,000 roubles. In the preceding year there was earned a net profit of 431,007 roubles, out of which 350,000 roubles were distributed as a dividend of 10 per cent.

PRICES OF RUSSIAN REFINED OIL IN BULK AT BATOUM AND LONDON.



The prices which we generally give for oil in London is for the bared product, for the reason that the oil dealt with on the London Exchange is in barrels, even though it only forms about 15 per cent. of this kingdom's oil trade, the 85 per cent. being sold in bulk, and distributed by the leading oil firms in England. The Russian Government, and many persons interested in the petroleum industry, have based their calculations upon all the oil imported into the United Kingdom realising this price, and consequently they have arrived at very inaccurate conclusions—that the distribution of Russian oil here has been carried on at a profit during the past few years. The special diagram which we here give shews at a glance that this was not so. The thick line represents the prices realised in London, while the dotted line shews the quotations for the same oil f.o.b. Batoum.

NEW OIL COMPANY.

ASHRAFI SYNDICATE, LIMITED.

Registered June 23rd, by John Barber, 19, Basinghall Street, E.C. Capital, £10,000, in £1 shares. Objects. To acquire, deal with and turn to account any petroleum or oil-bearing lands in Egypt or elsewhere; and to adopt an agreement with W. Barrier. No initial public issue. The first directors (to number not less than two nor more than seven) are to be appointed by the signatories. Qualification, 1 share. Remuneration, £50 each per annum (chairman £25 extra).

Our Readers will be interested in learning that Mr. Beeby Thompson, of Messrs. Thompson and Hunter, consulting engineers of Leadenhall Street, E.C., has recently returned from the West Indies and South America, after being away six months. Mr. Thompson spent two months in Trinidad investigating the oil deposits of that island in company with Mr. Cunningham Craig, the Government Geologist, and he has been negotiating with the Government for some options of supposed oil-bearing land in Trinidad. Mr. Thompson also made an inspection of the oil fields of Barbados, to which we hope to refer at length in a future issue.

The Question of the Pipe Line Rates.—A special conference will be held at the Railway Department in St. Petersburg to consider the question of the rate to be fixed for pumping oil by the through Baku-Batoum pipe line, now that this pipe line is complete. The conference will be attended by representatives of the Railway Department, the Ministry of Finance, Ministry of Communications, and other Government departments. The conference will open on the 9th of July.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company.	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	11-13
Baku Russian Petroleum ..	£750,000 Ord.	£1	16-16
Bibi-Eybat Petroleum Co. ..	£650,000 5½% Pref.	£1	32-32
Californian Oilfields ..	£250,000 Ord.	£1	16-16
European Petroleum ..	£550,000 Pref.	£1	16-16
" " ..	£550,000 Ord.	£1	58-58
" " ..	£376,000 Deb.	£100	2/6-3/6
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	0/6-1/6
Schibaieff Petroleum ..	£600,000 Ord.	£1	84-87
Shell Transport & Trading ..	£575,000 6% Pref.	£5	11/0-12/0
Spies Petroleum Company ..	£575,000 Ord.	£1	3-1
	£2,000,000	£1	24-34
	£1,000,000 Pref.	£10	28/6-29/6
	£312,500	10s.	93-95
			8/3-8/9

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on July 2nd.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co. ..	100	600	605
Balakhany Naphtha Co. ..	250	—	—
Caspian Society ..	1,000	3,650	3,700
Melikoff, A. C. ..	250	—	—
Mirzoeff Bros. ..	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	148	150
cheff & Co. ..	250	—	—
Neft Co. ..	250	—	—
Nobel Bros. ..	5,000	9,100	9,200
" " ..	250	—	—
Rops and Co., V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout ..	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading	250	—	—
Co. ..	250	—	—
" " " (Second Issue)	250	—	—

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 5th July, 1906, as follows:—

The depression in this market still continues, and from the manufacturers' point of view there is no improvement in the position. They are still hampered by the fluctuations in the price of tin, and they are obtaining no relief in the price of steel. The competition for what few orders there are on the market is very severe, and prices are to-day nominally as under:—

1C 18½ × 14	124 sheets	110 lbs.	13/0 per box.
1C 19½ × 14	120 "	110 "	13/0 "
1C 20 × 10	225 "	156 "	18/3 "

F.o.b. Wales. Tin lining and iron hooping extra.

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8½ pd	£199,750	£10	17½
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Burmah Oil, Ord. ..	£1,100,000	£1	54s. od.
Do. Pref. ..	£250,000	£1	25s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8½
Do. 5% Pref. ..	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	17½
Do. New (£8 10s. pd.)	£131,750	£10	17½
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	98s. od.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	12½
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	30
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	64s. 9d.
Do. "B" Deb...	£150,000	£100	152½

DUTCH COMPANIES.

Company.	Quotations Last Issue	Latest Quotations	Florins.
Arnhemsche Petroleum Mij. ..	77	80	1,000
Aurora " (Deb. 5%)	90½	90½	—
Campina Poiana Mij. ..	35	35	—
Dordtsche Petroleum Mij. (Pref.) ..	126	122	500
" " (Deb. 4½%)	102½	102½	1,000
Elzasser Petroleum Mij. ..	216	214	1,000
Gaboes " ..	19½	19½	—
Holl. Rumeensche Petroleum Mij. ..	32½-33½	26-28½	1,000
Int. Rum. Pet. Mij. ..	88½	88½	500
Java Petroleum Mij. (Ord.) ..	30	30	1,000
" " (Pref.) ..	42	42½	—
Koninklyke Nederl. Pet. Mij. Shares	479½-481½	480-487	250-1,000
" " Share certificates	480	478-482	1,000
Mœara Enim Petroleum Mij. ..	115	114½-115	100
" " 1-1,000 Oblig. 5	102	102	250-1,000
" Moesi Ilir " Petroleum Mij. ..	34½	34½	—
Nederl.-Rumeensche Petroleum Mij.	17	17½	—
Nieuwe Ned. Petroleum Mij. And...	55½	55½	1,000
Oliebronnen in Hannover Mij. ..	173	170	—
" " (Deb. 5%)	100½	100½	—
Panolan Maatschappij Cert. ..	340	340	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	123½	143½	1,000
" " (Common) ..	99½	97 x. d.	—
Sumatra-Palembang Petroleum Mij	62	61	500
Zuid Perlak Petrol. Mij. (Pref.) ..	88½	84½	—

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended June 23rd was 247,000 poods, or 3,992 tons; and for the week ended June 30th was 236,000 poods or 3,801 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended June 24th was 269,000 poods, or 4,337 tons; and for the week ended July 1st was 248,000 poods or 3,998 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended June 24th was 140,140 poods, or 2,260 tons. The output for the week ended July 1st was 77,560 poods, or 1,218 tons. The falling off in production is due to a strike on the oil fields.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended June 24th, 1906, was 106,349 poods, or 1,715 tons; and for the week ended July 1st was 108,496 poods or 1,749 tons.

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SATURDAY, JULY 7TH, 1906.

CONCILIATION, NOT AMALGAMATION.

AS our readers will doubtless be aware, we devoted considerable space in our leader columns a few years ago with respect to the question of the organisation of the Russian petroleum industry, and more especially the export branch of it. At that time we pointed out the remarkable condition then prevailing by shewing that whereas the prices for Russian refined oil upon the European markets, and more particularly in England, had reached their highest points, the refiners at Baku had to sell their oil at figures which dwindled down to such a point that the more they sold the more they lost. As illustrating the true position at that time, we give the following statistics:—

	1899.	1900.	1901 (seven months.)
Refined oil at Baku (per pood)	26.8	31.4	13.0
Russian kerosene in London (per pood)	94.4	110.0	106.0
Imports of Russian kerosene into the United Kingdom (in poods)	13,198,000	17,476,000	9,126,000

These figures clearly shew that during the period that high prices prevailed upon the English markets for

Russian refined oil, the Baku refiners were actually forced to sell the product at a loss, which in many cases was very substantial. This was in the face of the fact that the imports of Russian oil to this country were upon the increase, for had there been a lack of demand, one might possibly have accounted for the abnormal state of affairs.

But the cause was not far to seek. At that time the English market for Russian oil was monopolised by a leading firm of oil distributors representing Messrs. Nobel and Rothschild, and it was naturally to their advantage to buy their oil as cheaply as possible, and distribute at the highest figure they could by reason of their monopoly command. As we pointed out at the time, such a policy was very unwise, and was bound sooner or later to come to an abrupt termination, for it was certain that the Baku refiners, who were interested in the increase of Russia's export oil trade because they were bound to sell their surplus oil, would eventually take the necessary steps to rid themselves of such artificial conditions. There was only one way of this being accomplished, and that was by the other refiners organising their own distributing agencies all over Europe. That this step would be taken was apparent from the very moment that Russian refined oil became a factor in the English market; in fact, it was inevitable, and we quickly saw what the ultimate outcome would be, as is evidenced by our writings at the time.

It was very shortly after our prophecy, that two leading Russian refiners—Messrs. A. Mantascheff and the Caspian Society—joined for the purpose of distributing their own oil in Europe, and as we have said, ridding themselves of the artificial conditions which prevailed in the market at Baku. They created the Homelight Oil Co. (at first known as the Caucasian Petroleum Export Co.), which, from the first moment it set foot upon the English market, made rapid headway, so much so that during the four years it has been in existence it has built an enormous organisation, scattered throughout the whole of the United Kingdom, with tank installations in the large towns, and ocean depôts at the chief ports for the purpose of receiving oil direct from the steamers. In all, the company has no less than 186 depôts, and for the oil supplied, and its methods adopted toward the consumers, it has gained a name second to none.

The relation of the distributors of Russian oil in England to the refiners in Baku has consequently now entirely changed, for no sooner did this organisation spring into being than the prices for refined oil in Baku went up by leaps and bounds. This can best be seen in the following table:—

	1904.	1905.	1906. (six months.)
Refined oil at Baku (per pood)	27	22½	25
Russian kerosene in London (per pood)	110	81	100
Imports of Russian kerosene into the United Kingdom in poods)	22,115,000	12,461,200	4,410,000

Without explanation, this table plainly depicts the great change which has come over the refining industry

in Baku. The low prices which were prevailing consequent upon the appearance of the Homelight Oil Co. upon the English market, were due to fierce competition by the older distributing organisations in an attempt to hamper the operations and prevent the development of the new Russian oil distributing agency in this country, but now it is recognised that undue competition is a game in which more than one can play, and its result brings nothing but disappointment to those who indulge in it.

To-day, when the Homelight Oil Co. occupies a foremost position as a distributor of Russian oil upon the English markets, it is curious to find that rumours are spread—we do not indicate by whom—to the effect that a scheme of amalgamation with other existing companies is pending, so that before long, it is said, this company will disappear as an independent unit. To this rumour, however, we may give an emphatic denial, based upon a consultation with those who brought the Homelight Co. into existence.

Such an amalgamation is, in any case, next to impossible, as all oil men will agree. We have to remember that Messrs. Mantascheff and the Caspian Society are both interested as large sellers of refined oil and residuals in Russia, and so in arranging an organisation for the distribution of their surplus oil in Europe they have chiefly had in view the regulation of the prices in Russia itself: therefore no transfer or control of their distributing organisation to their competitors, who are chiefly interested in buying oils, could or ever will take place, for it would most assuredly mean that there would be a repetition of the former periods of abnormal conditions and disorganisation.

Then, again, if it were ever possible that such an amalgamation was brought into being, it is a moral certainty that the other refiners who have profited by the experiments upon the English market thus far would immediately create a new organisation in England and elsewhere. For this reason, apart from other reasons, we are sure that no amalgamation such as is rumoured can ever take place.

At the same time we do hope that the conciliatory attitude which has now been recognised among the distributing companies upon the English market will be but the forerunner to even a more apparent feeling of friendship, and will continue for a long time to come. The foolishness of unnecessary competition has never been revealed more than in the balance sheets of the various English distributing companies, and it is a matter for congratulation all round that the feeling of enmity has now given place to one of conciliation. Possibly it is this amicable understanding that has been the fountain for the rumour of amalgamation, but be that as it may, the former has, we feel convinced, come to stay, while amalgamation is beyond the region of possibility.

BAKU PRODUCTION IN FIRST HALF OF JUNE.

The production of crude oil at the Baku oil fields during the first half of June (o.s.) amounted to 18,800,454 poods, of which Bebe-Aibat contributed 5,470,416 poods.

Petroleum Occurrences in the Orange River Colony.

Mr. A. R. Sawyer has prepared a paper upon the subject of the petroleum occurrences in the Orange River Colony for presentation to the Institute of Mining Engineers. The author points out that the Nebo farm, whereon petroleum has been found, is situated about 15 miles north-east of Ficksburg, Orange River Colony. It lies within a large basin-shaped area, the rim consisting of more or less connected and more or less high hills or mountains. The deepest place and centre of the basin (E, Fig. 1), lies between the Gatzrand and Puntkranz farms, where the various streams meet in a deep channel, along which they flow into the Caledon river.

The hills and mountains, already referred to, consist, practically, of horizontal beds or strata of, in downward stratigraphical order (a) Volcanic rocks, (b) Cave sandstone, and (c) Red beds. These beds, with the coal-bearing strata known as the Molteno beds, underlying them, are known geologically as the Stormberg series, forming the upper portion of the Upper Karroo system.

The volcanic rock, topping the highest mountains in this neighbourhood, is amygdaloidal: the amygdules containing calcite, agate, and various kinds of quartz. These minerals are liberated through the disintegration of the rock, and have been washed downward into the valleys, where they occur in abundance in the river beds. The Cave sandstone is a buff coloured, pinkish, greenish, white and grey, fine-grained sandstone, about 150 feet thick.

The red beds consist of red, purple and greenish marls or shales; also red mottled green-and-grey sandstones, about 600 feet thick. At the point E (Fig. 1), the lowest place within the basis, the writer is of opinion that the strata lie somewhere near the bottom of the Red beds, and the Molteno beds cannot lie very far below them at that point.

The Karroo system is traversed by dykes and sheets of dolerite or diabase. Numerous dykes, some of which are indicated in Fig. 1, occur within the above-described basis. The main dyke, from 20 to 30 feet thick, is of

importance, as petroleum is found in it on the Nebo farm, at AB (Fig. 2). The diabase at this point, as is usually the case, is jointed; and the joints contain calcite and petroleum, the latter being discernible by smell and by touch. This dyke can be traced to the Puntkranz and Lemoenboom farms, where it had played an important part in the topography of the country. It had there indurated the sandstone in contact with it, and it had superinduced upon it prismatic forms at right angles to the dyke. This sandstone contains little hollows resembling amygdules, some of which are filled

with calcareous rock (Fig 3). The dyke had subsequently been weathered for some distance, and left a high wall of sandstone on its north-eastern side, forming a prominent landmark. Further to the south-east, where the dyke had not been so far weathered, sandstone still remained on both sides of it (Fig. 4).

The main dyke on the Nebo farm clearly shews evidence of having become impregnated, in the joints, with the products of distillation, arising, probably, from the destruction or alteration of coal or bituminous shale, due to the heat given off by it while in a liquid condition. This phenomenon is, therefore, evidence of the occurrence of petroleum at or about the lines of contact of the dyke and a carbonaceous bed; and of the occurrence of a carbonaceous

bed, and probably of a coal-seam, possibly of workable thickness, in the Molteno beds, which as previously pointed out, probably occur not far below the horizon of the strata found at E (Fig. 1). It is not possible to give an opinion as to the probability of petroleum occurring in any large quantity, but it is, however, intended to bore there shortly.

Similar phenomena occur in the Heilbronn district, but the rocks, in which the dykes there occur, belong to the Lower Karroo system. This is the first occurrence of petroleum in a dyke in the red beds that has come under the writer's notice. The results, therefore, attending operations, if any, amongst the Lower Karroo beds, cannot be taken as an infallible guide in this case.



In this connection it is interesting to note that in the Ficksburg township, thin bright coal-laminæ, a few inches thick, have been disclosed in what appear to the writer to be the lowest strata of the red beds, or the uppermost strata of the Molteno beds. The overlying sandstone contained numerous nodules of pyrites. The railway, now in course of construction between Bethlehem and Modderpoort, will pass close to this locality.

MESSRS. H. E. MOSS and CO.'S STEAMSHIP CIRCULAR.

In their half-yearly circular issued last Monday, Messrs. H. E. Moss and Co. state that they regret to have to record the usual reaction in the freight market which takes place after all great wars, and which has been most marked since the termination of the Russian-Japanese campaign. A similar reaction occurred after the war in South Africa, the American-Spanish war, the Franco-German war, and they well remember a similar result after the Abyssinian Expedition, in the late sixties. History has again repeated itself, for the last six months—the period under review—have been most disappointing to the majority of steamship owners.

The report goes on to state that there certainly was an improvement in freights in the early part of the year, but the great uprising in Russia, and the uncertainty as to political affairs, combined with the large amount of new tonnage continuously being put into the water and presently under construction, all tended to further delay the improvement in shipping, which many had anticipated.

In view of the large amount of new tonnage which has recently been launched, it is surprising how few steamers are presently laid up in this country, which proves the great increase in the volume of trade at home and abroad.

The returns shew that the total trade of the British empire in the year 1904 was valued at £1,305,283,000, and the exports alone in the same year from this country amounted to £330,000,000, being 23 per cent. over 1900, which was a record year. We feel sure that 1905 and 1906 will shew a much greater increase, and though we may expect periodical depressions, the enormous increase of trade all over the world must necessarily over-

take the excessive amount of tonnage ordered during the past twelve months, provided owners will not increase their tonnage, except for special trades. Under these conditions we venture to think the autumn of 1907 will shew a gradual improvement in the great shipping interest.

In support of this opinion we have only to refer to the Board of Trade returns for May, 1906, of the United Kingdom alone, as compared with May, 1905, the imports being valued at £51,430,457, an increase of £4,597,490, equal to 9·8 per cent., and the exports at £27,252,693, an increase of £4,477,234, equal to 16·4 per cent. Taking the five months ended in May last the imports shew an increase in value equal to 10·1 per cent., and the exports an increase equal to 15·6 per cent., as compared with the five months ending in May, 1905.

At the close of the quarter ending 31st March, 1906, there were under construction in the United Kingdom alone, excluding warships, 547 vessels of 1,401,882 tons, including only 7,000 tons of sailers—being within 12,000 tons of the total reached in September, 1901, the highest on record. As compared with the returns of the December quarter the figures shew an increase of 46,000 tons, while those of September, 1905, are exceeded by 76,000 tons. Great as these figures are, the returns for the quarter ending June 30th, when published, will be found still larger, and in excess of the record year of 1901.

BATOUN PETROLEUM SHIPMENTS.

The following are the shipments of petroleum products from Batoum for the week ended June 10th (o.s.):—

	Illuminating oil.		Other products.	
	1905.	1906.	1905.	1906.
To Europe	321,000	492,000	377,000	182,000
To the East	505,000	30,000	5,000	1,000
To Russian Ports	4,000	—	6,000	—
From Jan. 1st to June 10th:—				
To Europe ..	10,231,000	6,212,000	4,448,000	3,399,000
To the East ..	7,030,000	1,666,000	295,000	24,000
To Russian Ports	1,714,000	1,469,000	85,000	110,000

Calais Imports.—The imports of petroleum oils into the port of Calais in 1905 amounted to 13,593 tons, of which 6,928 tons came from Roumania 2,290 tons from Russia, and 4,375 tons from the United States. The imports from Russia shew a great falling off against previous years, due to the disturbances in the Baku district.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JULY 2nd, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since June 18.	From Jan. 1.	Since June 18.	From Jan. 1.	Since June 18.	From Jan. 1.	Since June 18.	From Jan. 1.	Since June 18.	From Jan. 1.	Since June 18.	From Jan. 1.	Since June 18.	From Jan. 1.	Since June 18.	From Jan. 1.
Austria ...	—	874,560	—	354,770	15,000	63,930	—	—	—	—	—	—	—	—	15,000	1,304,260
Belgium ...	—	240	21,330	246,040	—	11,000	—	—	—	5,300	—	—	1,000	2,486	22,400	254,066
Borneo ...	—	210	—	—	—	—	—	—	1,788,700	4,369,450	—	240	—	—	1,788,700	4,369,900
Canada ...	—	—	—	8,000	2,400	32,400	—	—	—	—	—	—	—	—	2,400	40,400
Germany ...	2,180	2,857,070	59,740	767,200	—	—	—	—	—	2,380	—	—	400	6,290	61,320	3,643,420
Holland ...	—	9,740	—	1,160	—	—	—	—	12,000	1,092,910	—	271,000	6,520	40,880	18,520	1,415,210
Roumania ...	432,325	2,563,175	—	—	—	—	130	1,035,680	591,980	591,980	—	—	—	—	1,024,435	4,190,835
Russia ...	1,383,910	17,648,200	1,506,730	2,502,760	—	—	—	1,604,250	—	—	—	—	—	5,660	2,890,690	21,760,870
Sumatra, &c	—	—	—	—	—	—	—	—	—	976,500	—	—	—	—	—	976,500
U.S.A. ...	680,490	46,147,217	796,330	23,145,304	9,280	533,553	737,580	24,444,550	8,000	5,591,140	—	9,047,730	17,520	461,950	2,249,000	109,361,354
Other Countries	—	1,370	10,000	22,350	—	—	—	—	—	480	—	—	—	210,800	10,000	235,000
	2,498,905	70,101,782	2,394,180	27,047,584	26,630	640,883	737,510	27,024,480	2,400,680	12,630,140	—	9,318,970	25,510	728,066	8,083,465	147,551,815

MISCELLANEA.

PETROLEUM IMPORTS INTO GERMANY DURING MAY.

The following were, according to the official figures, the imports of petroleum products into Germany in May, compared to April (in tons) :—

	May.	April.
Illuminating oil	39,413	47,843
Lubricating oil	12,995	16,352
Crude oil	2,618	1,423
Crude benzine	9,391	6,209
Refined benzine and petroleum ether	957	823
Artificial turpentine and other mixtures	98	127
Residuals	14	102
	65,486	72,879

The imports of petroleum products from the different producing countries in May, compared to April, were :—

	May. Tons.	April. Tons.
U.S.A.	42,317	49,905
Russia	8,784	8,629
Dutch India.. .. .	7,129	4,888
Austria-Hungary	3,177	4,358
Roumania	2,069	1,527
Other Countries	2,010	3,572
Total	65,486	72,879

THE AMALGAMATED OIL COMPANY OF CANADA.

The above is the title of a new company which has been recently granted a charter by the Canadian Government. The company, which is capitalised at \$1,000,000, has been formed to take over property in Lambton county, consisting of over 2,300 acres—500 acres of freehold, and 1,800 acres of perpetual leasehold. On these properties there are 409 working wells, ten good pumping plants, gravel beds, brick and tile yards, cement-tile plant, drilling rig, dwelling houses, blacksmith shops, and everything needed in the production of oil. The stock of the company is divided into 1,000,000 shares, of the par value of \$1 per share, and of this amount 300,000 shares have been issued and over subscribed. Pipe lines running right through the territory, and pumping stations close at hand, serve to lower the expenses of operating, and as there is an almost unlimited demand for the product at a good price, the prospects of the Amalgamated Co. are very bright.

THE PANAMA PIPE LINE.

WORK PROGRESSING.

Work on the pipe line of the Union Oil Co. across the Isthmus of Panama is progressing rapidly. Two months ago pipe had been strung for twenty-one miles out of the total of fifty, and the work of screwing the pipe had commenced. The foundation for five tanks had also been laid, and one of the tanks had been completed. The work on the stations was progressing rapidly, and there is every promise that the line will be ready for operation by August 1st.

MESSRS. MANTASCHEFF AND COMPANY HAVE A DISASTROUS YEAR.

Messrs. Mantascheff and Co., of Baku, have completed their seventh financial year 1905 with a loss of 993,432 roubles, against a profit of 1,913,672 roubles earned in the previous year. At the general meeting of shareholders held recently, it was resolved to apply for the purpose of writing off this loss the whole of the company's reserve fund, amounting to 683,600 roubles, and the balance of profits of 1904 amounting to 7,783 roubles. The remainder of the loss, to the amount of 202,048 roubles, is held over to be covered by next year's profits. For 1904 a sum of 616,000 roubles was distributed as a dividend of 2·8 per cent. on the capital of 22,000,000 roubles.

A NOVEL INVENTION FOR THE WELLS.

Messrs. F. H. Oliphant and H. E. Lyddon, of Oil City, Pa., have recently perfected a novel device for cleaning out old oil wells and increasing their productive capacity. The invention has passed the experimental stage and is now in readiness for inspection by those interested. The idea is to produce an intense heat which can be applied at any point along the oil-producing formation. This is accomplished in an ingenious manner. The heat burns out any old oily substance that may exist along the walls of the wells, and thus allows the petroleum free egress. The invention is a valuable one, and will assist wonderfully in increasing the yield from wells in old territory.

PRODUCTION IN GALICIA IN MAY.

The following was the output of crude oil at the Galician oil fields in May (in tons) :—

	Production.	Deliveries.	Stocks on 31st May.
West Galicia—			
Potok	1,310	924	6,425
Rogi	1,152	1,918	10,518
Rowne	191	138	289
Tarnawa-Wielopole-Zagorz	1,528	2,660	4,043
Krosno	4,219	6,305	15,090
Other West Galician fields	2,900	1,993	10,494
East Galicia—			
Boryslaw-Tustanowice	45,360	62,465	384,794
Schodnica	4,270	1,774	35,018
Urycz	1,270	1,644	15,540
Mraznica	120	204	1,558
Other East Galician fields	960	840	240
Total	63,200	81,865	486,009

The quantity of crude oil used as fuel at the oil fields or lost by leakage, etc., during the month amounted to 2,345 tons, of which 1,600 tons were used at Boryslaw-Tustanowice. The total stocks of crude oil declined during the month by 20,931 tons, which is a very satisfactory sign for the Galician petroleum industry. In the Boryslaw-Tustanowice field in particular the stocks declined by 20,705 tons.

AMERICAN NOTES

Throwing up the Sponge.—The Blue Ridge Oil and Development Co. has filed documents announcing its purpose of going out of business, and appointing a trustee to sell the lands and divide the proceeds among the stockholders.

The Oil Regions of Ontario.—The Mines Department of the Geological Survey at Ottawa has sent out one of its staff to report upon the oil and gas regions of Western Ontario. It is understood that the report will be most comprehensive and of real value to oil men.

In the Welsh District.—The Producers Oil Co. are now preparing to develop their holdings in the Welsh districts. In all, eight wells are already producing, and in order to deal with the Welsh product, a small refinery belonging to the Rio Bravo Oil Co. has been erected to manufacture lubricating oils.

The Pure Oil Company.—The current issue of the *Oil Investors' Journal* announces that the Pure Oil Co., of Philadelphia, has bought the holdings of the Syndicate Oil and Gas Co. in the Burton field of Wetzel county, W. Va., upon which property is twelve oil and two gas wells. In all, the property consists of leases on 1,300 acres.

Operators Protest.—A meeting of the Mid-continental Oil Producers' Association was held a few days ago, at which a resolution was passed protesting against the action of the Secretary of the Interior, which, as already announced in the REVIEW, is calculated to do a great harm to the oil developments of the Mid-continental fields.

Another Pipe Line.—In order to facilitate the movement of oil from the Saratoga field, the Sun Pipe Line Co. some time ago commenced the laying of a line from the field to a point intersecting the Higgins Oil and Fuel Co.'s line from Batson to Sour Lake. The total production of the field is now placed at nearly 9,000 barrels daily, as against 7,400 barrels in the middle of May.

Salt Water at Jennings.—Salt water is said to have made its appearance at the Jennings oil field, and is cutting down the old production to some extent. At the end of May, however, the new developments had resulted in a material increase of production compared with the figures for the few weeks preceding. At the end of May the daily production of the field was placed at 24,000 barrels.

Californian Oil for Japan.—The president of the Associated Oil Co., the vice-president of the Californian Refineries, Ltd., and the vice-president of the Union Oil Co. recently left San Francisco for Japan. Their visit, it is said, marks an important epoch in the production and distribution of Californian fuel oil, inasmuch as they have all gone to present tenders for supplying millions of barrels of California oil per annum in order that the oil may substitute coal.

At Hoskins Mound.—This locality is now the centre of interest in the Gulf Coast Oil regions. A number of wells are being drilled, and energy is general in consequence of the success of the Mound Oil Co., whose second test completed at a depth of 580 feet several months ago, has now been permitted to flow in order to determine its staying qualities. During the first 10 days of its flowing it is estimated that it produced no less than 14,000 barrels of oil, but the flowing was only intermittent owing to the lack of storage accommodation.

Mid-Continent Statistics.—For the first 14 days in June the runs from the Kansas and Oklahoma oil fields averaged 51,425 barrels, which is a decline of 4,767 barrels from the May average. The shipments for the same period averaged 22,659 barrels a day, or 3,239 less than those for May. The runs exceeded the shipments by 28,766 barrels a day, which amount was added to the stocks now on hand, which are the largest at any time in the history of the field. The runs for May averaged 56,192 and for April 59,308 barrels a day.

The California Oil Company, Los Angeles, has completed arrangements for resumption of work on its oil lands on the Newhall district. The site selected for the company's new well is on a tract of 160 acres of land owned by the company, and adjoining land owned and operated by the Standard Oil Co. on which are producing wells. Other wells are in operation a short distance on the opposite side of this tract, and all oil men who have examined the location are of the opinion that every indication points to obtaining a good flow of fairly high grade oil at no great depth. The machinery has been set up, and all necessary buildings erected and all other preliminary work completed.

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR MAY.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during May were as under:—

		1905. Quantities. Gallons.	1906. Quantities. Gallons.
CRUDE—			
Baltimore	.. ..	—	—
Boston and Charlestown	.. ..	—	—
Delaware	.. ..	6,323,682	12,024
New York	.. ..	—	—
Philadelphia	.. ..	350,529	5,424,408
Galveston	.. ..	3,601,491	3,549,085
Total	.. ..	10,175,702	8,985,517
Total value for the month, 1905..	.. ..		\$519,553
" " " 1906..	.. ..		\$507,837
NAPHTHAS—			
Baltimore	.. ..	—	—
Boston and Charlestown	.. ..	—	—
Delaware	.. ..	—	—
New York	.. ..	457,226	1,488,219
Philadelphia	.. ..	2,949,757	790,313
Galveston	.. ..	536	—
Total	.. ..	3,407,519	2,278,532
Total value for the month, 1905 ..	.. ..		\$152,059
" " " 1906 ..	.. ..		\$208,469
ILLUMINATING—			
Baltimore	.. ..	1,197,491	4,388
Boston and Charlestown	.. ..	99,789	3,951
Delaware	.. ..	—	—
New York	.. ..	38,644,540	39,634,197
Philadelphia	.. ..	26,519,834	23,271,355
Galveston	.. ..	3,298,345	—
Total	.. ..	69,759,999	61,913,901
Total value for the month, 1905 ..	.. ..		\$4,157,027
" " " 1906 ..	.. ..		\$3,974,553
LUBRICATING AND PARAFFIN—			
Baltimore	.. ..	189,619	560,040
Boston and Charlestown	.. ..	13,813	12,116
Delaware	.. ..	—	—
New York	.. ..	4,300,900	7,053,881
Philadelphia	.. ..	1,716,079	2,623,046
Galveston	.. ..	3,306	12,558
Total	.. ..	6,220,907	10,261,641
Total value for the month, 1905 ..	.. ..		\$830,251
" " " 1906 ..	.. ..		\$1,330,026
RESIDUUM—			
Baltimore	.. ..	—	—
Boston and Charlestown	.. ..	221,298	245,000
Delaware	.. ..	—	—
New York	.. ..	3,040,800	1,731,653
Philadelphia	.. ..	2,558,766	4,419,516
Galveston	.. ..	5,166	—
Total	.. ..	5,826,030	6,396,169
Total value for the month, 1905 ..	.. ..		\$169,230
" " " 1906 ..	.. ..		\$196,778
TOTAL MINERAL OILS—			
Baltimore	.. ..	1,385,110	564,428
Boston and Charlestown	.. ..	334,900	261,077
Delaware	.. ..	6,223,682	—
New York	.. ..	46,442,666	49,919,974
Philadelphia	.. ..	34,094,965	36,528,638
Galveston	.. ..	6,908,844	3,561,643
Total	.. ..	95,390,157	90,835,760
Total value for the month, 1905 ..	.. ..		\$5,927,120
" " " 1906 ..	.. ..		\$6,217,663

Yokohama April Imports.—During the month of April there were imported into Yokohama 804,542 gallons of kerosene, valued at 161,109 yen, while during the corresponding month of last year 1,945,659 gallons were imported, this quantity being valued at 401,586 yen. During the first four months of the present year, the total quantities of kerosene imported amount to 4,567,419 gallons.

OUR AMERICAN LETTER . .

*From Our . . .
Special . . .
Correspondent.*

PITTSBURG, June 19th, 1906.

Conditions in the lower south-west fields since my last letter to the REVIEW have shewn no improvement over those that have prevailed for a number of months. In nearly all districts light wells have ruled, and the failures have been confined to no particular locality. Even the new Keener pool on Point Pleasant creek, Tyler county, has not been immune from dusters. Until the past fortnight this district was remarkably free from dry holes, and no other development since the first of the current year has furnished a like amount of new production. The dry holes completed are located in advance of developments, and shew that there can be little hoped for in the way of extending the producing limits on the field. Owing to the completion of good producers inside of the defined limits, the production of the field as a whole has been kept from a noticeable decline. The completion of an occasional interior producer, and a rather liberal use of the high explosive fluid in some of the old wells, kept the production above 2,000 barrels a day. It is a feature worthy of mention that when shot the old wells do not fail to respond with an increase in production. This method of forcing the production of the pool will prove effective for some time, but it is a lose-open sand formation, and in a few months will be abandoned.

Speaking of the Point Pleasant pool, one is reminded that its discovery started some wildcat operations along the eastern edge of Tyler county. For almost two years before the Point Pleasant pool was discovered, wildcatting in that part of Tyler county was kept up almost incessantly. Occasionally a fair producer was found, but when an effort was made to extend the producing area, dry holes were encountered. This was true of the development near Middlebourne. The first few completions were fair producers, and were the incentive for drilling 15 or more wells in that locality, and of the number not more than one-third came in paying wells. With no large blocks of untested territory in the counties that have been under development for many years, operators realise that there is little hope for anything better than small pools, and the brush will have to be well beaten to find them. Probably 25 dry holes were drilled before anything as good as the Point Pleasant pool was discovered. Last year the Wick pool in Meade district, in the same county, was the best producer, and the finding of that pool was no less expensive. Now it has been fully defined and the interior developed, but there is still a little prodding for another in that section.

In Grant and Murphy districts, in Ritchie county, the prospects a few months ago were very promising. Development work has been carried forward since that time, but the results have not been entirely satisfactory. The formation has proved irregular, and dry holes have been encountered in proximity to good producers. The best well completed was brought in by the South Penn Oil Co. about the middle of this month. It is this



company's No. 5 on the P. M. McGinnis farm, located on Silver run, Grant district. Its best production for 24 hours, under agitation, was 260 barrels. On Silver run there is more new work starting than in any other part of the county.

Operations are picking up in all sections of the Trenton rock oil fields of Ohio and Indiana, and an active campaign is looked for unless the unforeseen happens to stop the activity of the industry. There remains a lot of locations yet to drill in the older fields and these parts shew the most activity. At the same time a number of test wells are under way, and should they come in producing wells will add quite a scope of undrilled territory to the fields. The late developments in the Butler pool in Richland county have proven a losing venture for all that took a chance shot. The original well there that caused all the excitement has dropped off until it is now only making about 10 barrels a day, and the others that are producing oil are very light. The cost of a well there is something like \$6,000, and when one gets a small well it takes a long period to realise the first cost, if ever a well does pay out.

In the deep sand districts, in Marion, Wetzel and Harrison counties, the late completions are not such as to lend encouragement to active development work. Near Glover's Gap, in Marion county, the new work called out by the drilling in of a good producer on the Snodgrass farm is now well under way, and within a few weeks more, will be known of the future of the pool. The oil in this district is found in the "thirty-foot" formation, and there is room in the vicinity for a pool of some dimensions.

In the Folsom district, in Harrison county, Miller and Co., drilled in a test well that produced a little better than 100 barrels the first 24 hours after it was drilled into the Gordon pay. To offset the good showing of this test, three light producers were completed in the same locality. Owing to a number of important test wells nearing the sand, in advance of the Rowells run district, in Calhoun county, interest in that section has been revived.

In the Mid-continent field no district can claim a monopoly or shew increased activity. The shallow field records more completions than any other district, but even there, where conditions are very favourable for development work, operators are not rushing things, principally for the reason that wells cannot be handled regularly when completed. In the deep sand districts of Cherokee, particularly from Bartlesville, north to the Kansas line, not so much work is in sight as there was a month ago, or as was indicated by the number of rigs and drilling wells reported at the close of April. In the Osage field, work has varied but little for months. Oklahoma is at a standstill, so far as oil is concerned, while the Greek nation is doing but little. Indian Territory, I might mention, has now been merged with Oklahoma into a State, and this fact alone has caused a slight set back to operations for a few weeks.

THE ROYAL DUTCH COMPANY.

PROPOSED AMALGAMATION WITH THE SHELL COMPANY.

The Koninklyke Nederlandsche Maatschappij tot Exploitatie Van Petroleum Bronnen in Nederlandsche-Indie, known in the trade as the Royal Dutch Co., are now playing an increasingly important part in the world's petroleum trade. By its alliance with the Shell Co., the Royal Dutch has already occupied a predominant position on the Asiatic market, and now when the Shell Co. has decided to withdraw from the European trade and concentrate their efforts on the Asiatic markets, the need is felt for a re-adjustment of the relations between the two companies.

It is now a question of amalgamation, and there are now, according to reports, only minor questions to be arranged before the matter is definitely settled. By such amalgamation the Royal Dutch Co. will have concentrated in its hands the whole of the illuminating oil and benzine trade in Asia. It will only have to reckon with the competition—not very formidable—of the Burmah Oil Co., which plays an important part only in British India.

In view of these developments it is interesting to mention a few particulars of the resources and financial position of the Royal Dutch Co. This company has its own petroleum fields in Borneo and Sumatra, a refinery in Sumatra, storage installations at Karachi, Madras, Calcutta, Sambas, Bangkok, Hong-Kong, Swatow, Shanghai, Bombay, Foochow, Amoy, Tientsin, Hankow, Rotterdam, Dusseldorf, etc. They have also a lubricating oil refinery, paraffin refinery, and tank steamers of the latest designs.

The company controls the whole petroleum output of Dutch India, both by the production from its own fields and by the agreements which it has with the Sumatra Palembang Co., Perlak Co., Moeara Enim Co., East Borneo Co., Nederlandsch-Indische Exploration Co., and other Dutch-Indian firms.

The relations which have until now existed between the Royal Dutch Co. and the Shell Co., and which are about to culminate in an amalgamation, have already resulted in the formation of the Asiatic Petroleum Co., a third of the shares of which are held by the Royal Dutch Co. Apart from the Royal Dutch and Shell Co.'s in the Asiatic Petroleum Co., there are also interested the Moesi Ilir Co., the Dordtsche Petroleum Co., and the principal Russian firms exporting oil to Asia. The Asiatic Co. has thus the exclusive right for the sale in Asia of the petroleum oil produced by the Dutch-Indian petroleum companies and their allies.

The financial position of the Royal Dutch Co. is illustrated by the following figures taken from the balance sheets for the 10 years ended 1904:—

Year.	Capital in florins.	Reserve in florins.	Debenture Debt in florins.	Gross Profit in florins.	Net Profit in florins.	Depreciation in florins.
1895 ..	2,300,000	613,844	—	2,892,748	1,260,740	—
1896 ..	3,000,000	2,760,000	1,500,000	4,077,710	1,664,189	—
1897 ..	5,000,000	9,860,714	1,500,000	7,027,541	2,776,980	—
1898 ..	6,500,000	9,705,712	1,459,000	7,268,828	1,458,628	—
1899 ..	6,500,000	9,636,516	1,400,000	1,838,935	359,775	601,129
1900 ..	6,500,000	9,655,215	1,392,000	1,923,282	502,763	995,634
1901 ..	6,500,000	9,778,365	1,360,000	5,026,610	1,470,744	867,627
1902 ..	6,500,000	9,828,705	1,320,000	5,253,787	2,178,959	847,833
1903 ..	7,500,000	—	—	8,164,479	4,956,789	1,154,609
1904 ..	13,000,000	—	—	11,810,262	4,263,761	2,046,874

THE KING AND QUEEN OF ROUMANIA HONOUR THE PETROLEUM INDUSTRY.

In accordance with their promise, their Majesties the King and Queen of Roumania, accompanied by the Crown Prince Ferdinand, recently paid a visit to the pavilion of the petroleum enterprises controlled by the Disconto-Bleichroeder group, at the Roumanian Jubilee Exhibition. At the entrance to the pavilion their Majesties were received by Dr. C. Solmssen, one of the directors of the Disconto Co. and president of the Credit Petrolifer; Mr. H. Schlawe, general manager of all the petroleum enterprises of these two banks, and greeted in suitable terms. Their Majesties had a walk through the pavilion and stopped at the section of the Bustenari and Telega Co., where there is a relief plan of the oil region, and models of hand wells and borings, while a geological study of the oil fields, represented by profiles of strata painted on glass, greatly interested their Majesties.

In the section of the Vega Refining Co. their Majesties listened attentively to the technical explanations given by Mr. Schlawe on the subject of petroleum refining. A model of a complete petroleum refinery in working, shewing the manufacture of illuminating oil and benzine in all its phases, was admired by their Majesties, while they also carefully inspected the samples of various oils, shewing the difference between Roumanian and Russian products.

In the section of the Credit Petrolifer their Majesties were shewn boring appliances and apparatus for burning liquid. In regard to the latter their Majesties were pleased to learn that they were manufactured in Roumania.

On issuing from the pavilion their Majesties saw the petroleum hand well specially placed there, and conversed for a considerable time with the well man just come out of the well, covered from head to foot in oil, and who freely answered all questions put by his Majesty. The oil well was, of course, an imitation, but the man and his garments were authentic. The horse-winding gear and the great bellows lent striking reality to the scene.

MANTASCHAFF'S CASE OIL FACTORIES TO BE RE-OPENED.

It is now officially announced that an agreement has at last been arrived between the Mantaschaff Co. and their workmen at Batoum; and the case factories belonging to this firm re-started work on the 25th of June.

The Purification of Cleansing Waters of Petroleum Refineries.

By PROF. E. DONATH.

In the most extensive works on cleansing waters, etc., by Dr. J. König and Dr. Ferd. Fischer, only a little is given on the purification of the cleansing water from the mineral oil factories (especially the petroleum refineries) and the method of its purification. Certainly the technical leaders of the mentioned industrial establishments have experiences in this direction, but in the German literature (at least in that accessible to me) there are no detailed communications relative to this matter. W. Gintl engages himself in thoughts on the erection of a petroleum refinery, which in design and detailed accomplishment can be regarded as a model for that sort of judgment, and also with the cleansing of such.

Since I have made observations and experiments in this line I think it proper to make some communication upon the basis of the same in the following:—

The cleansing water or fluid waste products of the mineral oil refineries differ somewhat according to the manner of management. Supposing knowledge of the latter in general I observe that the differences exist, among other things, in the manner of distillation, especially of lubricating oils, as in the method of doing the same by heating the lubricating oil boiler from without alone or simultaneously by the co-operation of directly entering steam.

In general, the following purifying waters will result (apart from those which were occasioned by very special manner of carrying out the business, or by extending the process to other products):—

1. The purifying waters which will be obtained if one condenses with water the different fractions of the distillation after eventual air cooling.
2. The condensing waters of the machines employed for the purpose.
3. The wash waters which separate after the resulting chemical purifications of the different distillates, both of kerosene and lubricating oils, with concentrated sulphuric acid.
4. The waters which result from the lyes treated with the sulphuric acid and oils previously washed with caustic soda lye.
5. The purifying waters which result during purification of the different vessels.

To these are to be added the purifying waters which form the use of the outer firing through the introduction of steam, through the condensation of this steam with the distillate concerned, and which we will designate as distillation condensing waters.

Finally the special well waters contained in many Galician crude oils are to be considered as cleansing waters, which amount to over 5 per cent. in many consistent oils. A part of this is separated in the crude oil reservoirs, another part is separated by previously warming the crude oil, and the last part is first separated in the boilers before beginning the distillation. These well waters, as is perceptible from the others introduced, are not inconsiderably impure, as water withdraws much more substance from the crude oil than from any of the distillates obtained.

Of these cleansing waters the cold water introduced under 1 should really shew no impurity if the apparatus in which the condensation of the distillate is effected are fluid tight, as it is to the interest of the manufacturer to prevent loss. After my experiments they were very weakly, opalescently dull underneath. If even the smaller defects in the thickness of the pipe connection, etc., are not cared for, then, under conditions, extremely small quantities can be reached, sometimes only greater traces of the distillate in the cooling waters which, however, are sufficient to effect the opalescent and to give the same the characteristic odour in a certain perceptible degree. With these very small quantities

these impurities appear to be virtually dissolved in the cooling waters since the bodies concerned are not absolutely insoluble in water, or, eventually very finely divided, are emulsified so that the cooling waters appear perceptibly opalised thereby, and it would be carelessness in the control of the business if greater perceptible masses of the concerned oil fractions, coming for mechanical separation, were obtained in the cooling waters in coherent fluid strata.

I have repeatedly taken cooling water from the cooling apparatus, but by shaking with ether found scarcely any impurities worthy of remark.

The machine condensing waters can be regarded as almost pure, as I had the opportunity to convince myself many times in two establishments.

The sulphuric acid used for purifying the distillation of the kerosene distillate is drawn off from the agitators, as is well known, and is sold or otherwise disposed of, so that, for the most part, it does not come into consideration as a waste product coming for purification.

The sour tar from the purification of the heavier fractions should, in any case, be manipulated by myself, and is either mixed directly with lime, according to rule, and, nearly dried thereby, urned, or, with the addition of lime through coal grit, is brought for drying, and is burned in this mixture. In any case these fluid waste products can be either sold or removed without difficulty, so that they do not need to be taken into consideration with regard to the purification of the cleansing waters.

The wash waters of the sulphuric acid purifying are impure in a considerable degree. They contain, first of all, traces of the different carburetted hydrogens of the earth oil, then certain quantities of the fat acids and petroleum acids, soluble sulfo acids generated by the influence of the sulphuric acids, a certain quantity of sulphuric acid itself, and finally certain quantities of sulphuric acids formed in the purifying process with sulphuric acid. These wash waters always have a yellow or brownish green colour, and a characteristic odour of burning petroleum or tar. Moreover, these waters eventually contain the sulphate of the pyridin base of the crude oil.

The lye waters are impure in a still more important degree. The caustic soda draws petrol acids and fat acids from the oils forming certain soap solutions. The latter, as is well known, have the property of emulsifying certain carburetted hydrogens, so that the first lye water possess a yellowish white, milky to brown, yellow milky appearance.

The waters condensed with the eventual distillation of kerosene, as also lubricating oil with steam, contain a certain small quantity of soluble substances, as traces of carburetted hydrogen, volatile fat acids, petrol acids, and perhaps aromatic acids and phenol, also eventually traces of organic bases, whereby they obtain a characteristic odour and a yellowish to brownish colour. In any case these are to undergo adequate purification.

The purification waters from the steaming of the glued and sanded casks are not considerable in proportion to the amount, and since one permits the glue solved in the hot water to separate again to a large extent in the cold, the content of glue in the water flowing off is not important, so that in most cases special regard to these well-known bodies, easily broken in the purifying waters, does not appear to be necessary.

The waters from the flushing out of the casks are, as is evident, impure in a very different degree, and must therefore be carefully collected and brought to the purifying establishment.

The claims which can now be credited to the purifying waters of the business in question are the following:—

- *1. The complete removal in the purified waters of everything mechanically admitted into the crude earth oil from its source, or in any distillation products

produced from the same. That such enter into the purifying waters during the process cannot be absolutely avoided even by employing the greatest precautions. On the contrary, by enforcing adequate precautionary measures for the workmen they are disregarded, so that by over-filling or necessary transportation a considerably larger amount of crude earth oil is admitted into one of the drainages of the purifying waters. An admixture of crude earth oil in a purifying water is much more detrimental than the admixture of a distillation product, because the water has to dissolve and absorb many more impurities from the crude oil than from any one of the distillates, which can then be scarcely removed even by chemical purification.

2. The purifying waters should reach the overflow in neutral condition. A weak alkali condition, occasioned by a content of free lime, is not so harmful as when the same decreases or disappears in course of time through neutralising the lime by carbonic acid.

In the further course of this discussion it will be proved what damage could be occasioned by such an over-neutralising with lime.

Concerning the measures for the accomplishment of this claim, Gintl has expressed himself in the opinions introduced in the beginning. In these it is put down as necessary to bring the really unpurified purifying waters in equal mixture with the pure cooling waters for withdrawal, and for this purpose to establish collecting pits, which first receive all these purifying waters for the purpose of an equal mixing.

I cannot reconcile my experiences with these conclusions. The most impure waters are the acid and alkali wash waters. These are so constituted that they should be obtained alone for purification in the most undiluted condition possible. It is recommended to collect the same in adequately high and less broad wooden barrels lined with lead. The reaction of the mixed waters will always be an acid since the caustic soda is not employed with lye in the sulphuric acid mass present for complete neutralisation, and if this was not the case, then a strong acid reaction would be occasioned by a further addition of a corresponding quantity of sulphuric acid. Through mixing with the sour purifying waters the soap-like combinations of the soda with the petrol are broken, and thereby the ability to emulsify the carburetted hydrogens is for the most part preserved. If one heats almost to the boiling point, only the sour content of these leaded barrels by means of steam conducted in a lead pipe, and leaves it undisturbed several hours, the emulsified carburetted hydrogens separate with the free acids and tarry resin products on the surface of the fluids in the barrels. One can now withdraw from these oily cohering strata the more or less coloured, but still clear, sour lower water and deliver for further purification. By the mixture of the sour and alkali very impure waters, and by treating in the prescribed manner, one can withdraw more of the contained impurities than after their dilution with other purifying waters, whether pure or only a little impure.

The distillation condense waters have eventually to be undertaken with the acid and alkali wash waters of the prescribed treatment.

One permits the condense waters from the cooling and power machines to flow off through a canal, and immediately before entrance into the described purifying establishments to mix with the sour reagent purifying waters flowing from the leaded barrels. Thereby, as only the collective purifying waters of sour reaction, the latter separation of the mechanically suspended or emulsified carburetted hydrogens and other substances results far better than in neutral or very weak alkali fluids. First, then, in the first part of the purifying establishment through the inserted syphon a separation of the mechanically admixed elements of mineral oils, also floating on the surface in drops or in larger quantities or emulsified, is to be prevented so far as possible if one proceeds to the neutralisation of the purifying waters. Herewith either lime water direct or a soft porous limestone can come into consideration. The neutralising with lime water has its advantages,

but also its disadvantages. The advantages consist in the fact that, in the first place, a precipitate arises through the lime water, the different suspended or emulsified particles mechanically (as well as through chemical union) form eventual fat or petroleum acids, whereby not only the neutralisation is complete, going even to alkali reaction, but also a further purification is obtained. The disadvantages of the employment of lime water are that subsequently a sedimentation of the lime precipitate in the purifying establishments must result, which makes necessary not only a correspondingly larger establishment of the same, but also altered condition of the sediment basin and periodical removal of the lime slime. A surplus of lime water, sometimes even in considerable quantities, can, if the purification is not uninterruptedly watched, easily be present, and the draining purifying waters appear then somewhat turbid or thick through lime separation. They possess, as is only recognisable in the immediate vicinity, a distinct odour of pyridin bases which are made free from the sour purifying waters by the lime.

Therefore, after I had ordered an addition of lime water and consequent sedimentation in one establishment, in a latter case I came away and allowed three chambers of the purifying establishment to be entirely filled up with porous limestone, through which the sour purifying waters slowly flowed after they had passed the former chambers with syphon connections. The limestone suitable heretofore is not easily to be obtained everywhere. The thick coarse crystalline limestone, very rich in carbonate of calcium, is not suitable heretofore, since the acids of the purifying waters work in much too little in the dilution in question. Heretofore a more pliable, more porous limestone, in some measure similar to chalk, must be employed. If such is not easily to be obtained in the locality at a suitable price, a neutralising with lime-water must finally be undertaken.

In the first case, by the employment of suitable limestone, the reaction of the purifying waters finally flowing off will be very weakly acid, since a complete neutralising is not attainable through such under the given conditions. This, therefore, can only be carried through in a case where the water conditions in the river courses into which the purified purifying waters flow are so far favourable that this weak sour reaction is soon nearly removed through the relatively important amount of the diluted water. In this case (neutralising through suitable limestone) the purifying waters flowing off remain clear, and purifying establishments require no special sediment basins and filter chambers. If, however, one is obliged to accomplish neutralisation with lime-water (which is more advantageous with respect to the effects of the purifying for the given reasons), then in the purifying establishments one requires sediment basins (of a suitable, well-known quality) and filter chambers, for the water is always more or less muddled by the mechanically suspended precipitate.

Concerning the quantity of sodium sulphate contained in the purifying waters of a mineral oil refinery, there are numerous unestablished data relative thereto. Gintl establishes the consumption of caustic soda with lyes of kerosene at 0.3 per cent. of the weight of the latter. In one mineral oil refinery, under the same conditions, I increased the same by 0.26 per cent. For lubricating oils, Gintl fixes the consumption of caustic soda at from 0.4 per cent. to 0.5 per cent. of the weight of the lubricating oils, but I have increased the same to over 0.9 per cent. According to other unestablished data one can estimate the consumption of caustic soda at 0.2 per cent. for benzine and kerosene, and at 0.6 per cent. for lubricating oils and paraffin.

If one reckons this average amount of caustic soda in sodium sulphate then it follows that the quantities of sodium sulphate in the purifying waters, arising alone, through the mixture of the acid and alkali wash waters are very considerable in the large mineral oil refineries, therefore the idea was formed of looking more closely to the recovery of the salt from the purified wash waters.

The American Oil Market.

New York, Week ended June 23rd.

The reports from the older petroleum producing States during the past week have been of a discouraging character. While the completions reported embrace a few large wells the preponderance of the new wells were small pumpers, while the percentage of dry holes has been larger than for several weeks, and it now appears doubtful if the new production in June will exceed that recorded for May. There have also been reported a few extensions to productive limits, but none of these is regarded as important, and the outlook, which appeared promising a few weeks ago, is now regarded as unfavourable. While the reports from the older fields have been most gratifying, and all interested are turning attention to that State as the one to make good the decreasing output in the other States. Flowing wells appear common enough, says the *Oil, Paint and Drug Reporter*, and a well which does not shew more than double the average production of the West Virginia or Ohio wells, is regarded as a small well. The average production of the wells thus far completed is over 40 barrels per day, and gushers shewing an initial production of several hundred barrels are reported almost daily. Naturally operations there are being prosecuted with vigour, and considerable excitement is reported in the producing sections, every owner of a parcel of land having visions of prospective wealth, and values are advancing with leaps and bounds. Pipe lines are in course of construction, and soon the product from the Sucker State will be available by the refineries, and will then come into direct completion with the product from Indiana and Ohio. As the production in those States is insufficient to prevent decrease in stocks, the Illinois oil will probably not affect market values. The conditions in the Mid-continent fields shew little change, though development work is not prosecuted with the unreasoning activity it was before the stocks became burdensome. Stocks, however, continue to increase, and the problem of utilising the oil as yet remains unsolved. In Texas the production remains about stationary, but less activity is reported, fewer new rigs being erected, and a smaller number of wells are being drilled. There have been no further changes in prices, but previous quotations are said to be firmly maintained.

REFINED AND PRODUCTS.—The demand for refined for export has shewn decided improvement during the past week, and while this is due, for the most part, to the altered position of the tank fleet, it is believed that supplies abroad have been allowed to run low, and that the requirements will continue large. The situation in the European markets shew no important change. The engagements during the past week have exceeded 250,000 barrels, all for shipment in bulk.

The price for barreled oil has remained firm at 7·80c. for New York loading, and at 7·75c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are firm at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel.

Cases for export have been in active request, and sales of about 400,000 are reported. The price of plain tops has been steady at 10·30c. Freight rates are firm.

Crude for export has been in good request, and sales of about 50,000 barrels are reported. Pennsylvania crude is quoted at 7·80c. in barrels.

Crude naphtha continues firm. For export, sales of about 5,000 barrels have been reported.

CLOSING QUOTATIONS.

CRUDE.		Week ended	
		June 16. 1906.	June 23. 1906.
National Tran, Certificates	per bbl.	\$1·64 @ 1·65	\$1·64 @ 1·65
Pennsylvania crude in bbls.	per gal.	7·75	7·75
Pennsylvania crude in bulk	.. ..	4·70	4·70
Residuum, bbls for export	.. ..	6 @ 6½	6 @ 6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—
Week ended

	June 23. 1905.	June 23. 1906.
Tiona	1·42	1·74
Pennsylvania	1·27	1·64
North Lima	0·86	0·98
South Lima	0·81	0·93
Indiana	0·81	0·93
CANADIAN OIL:		
Petrolia	1·26	1·37

REFINED—FOR EXPORT.

	Week ended	
	June 16.	June 23.
Cargo Lots for export.. per gal. ..	7·80	7·80
In bulk	4·70	4·70
Philadelphia loading	7·75	7·75

REFINED IN CASES—110 FIRE TEST.

	Week ending	
	June 16.	June 23.
5,000 to 10,000	10·35	10·35
1,000 to 5,000	10·50	10·50

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

	Week ended	
	June 16.	June 23.
120 fire test, S.W. .. per gal. . .	12	12
130 fire test, S.W.	12½	12½
150 fire test, W.W.	13	13
In bulk from tanks	10	10
300 fire test	12½ @ 13½	12½ @ 13½

NAPHTHA AND GASOLENE.

	Week ending	
	June 16.	June 23.
Naphtha, crude, car lots, 68 @ 72 deg.	12·00	14·00
Gasolene 86 deg.	14	22·00

PENNSYLVANIA OIL RUNS from June 15th to June 21st were:—June 15th, 61,793; June 16th and 17th, 115,869; June 18th, 53,326; June 19th, 77,834; June 20th, 89,152; June 21st, 76,421. For the month of April, 2,202,441.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—59,875; 139,196; 67,920; 73,480; 83,389 81,387. For the month of April, 2,138,379.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended June 22nd and from Jan. 1, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	275,000	5,287,600	5,458,100
Refined, cases	380,000	7,502,000	11,157,000
Crude, barrels and bulk..	49,300	828,200	584,700
Crude, cases	—	227,000	112,000
Naphtha, barrels.. .. .	—	210,800	231,600
Residuum, barrels	4,000	433,800	499,500
Lubricating, barrels	9,500	161,000	92,200
Total, barrels cde. eq. ..	671,072	11,653,988	12,628,307

CLEARANCES FOR THE WEEK.

During the week ended June 22nd, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	8,568,200	229,293,220	239,085,371
Crude	1,250	229,050	627,144
Naphtha	269,550	10,448,307	7,480,143
Residuum	—	—	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended June 22nd ..	11,425,517
Total from New York, from Jan. 1, 1906 ..	306,636,690
Same period last year	319,407,640
Decrease	12,770,950
From United States, week ended June 22nd..	31,898,855
Total from United States, since Jan. 1, 1906	558,776,824
Same period last year	587,473,504
Decrease	28,696,680

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The "Review" Shipping List.

JULY 5, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE.	Philadelphia	Sables d'Olonne	Arr. June 22	GOLDMOUTH	Blexen.....	Cardiff	Arr. July 2
ALCHYMIST	Smyrna	—	At Malta,	GUT HEIL.....	New York ..	Havana	L. June 24
AMERICAN	Honolulu ..	Del. Break	July 2-3	HAINAUT(Dch.shp.)	Antwerp	Constant'ple	Arr. July 1
APPALACHEE	San Francisco	Shanghai ..	L. Hilo,	HARRY	Ibrail	Campana ..	L. St. Vincent,
APSCHERON.....	Tyne	Batoum	June 10	WADSWORTH	—	—	(C.V.), June 15
ARAL	Copenhagen	Tyne	Arr. abt. June 4	HELIOS	New York ..	Hamburg ..	Arr. June 16
ARAS.....	Tyne	Batoum	P. Sagres,	HOTHAM	Port Arthur	Antwerp	L. June 21
ARGYLL	Monterey ..	Kahului	July 3	NEWTON	(Texas)	—	—
ASTRAKHAN.....	Philadelphia	Cuxhaven ..	Arr. July 3	HOUSATONIC	Kalodadi ..	San Francisco	Arr. June 18
AUGUST KORFF..	Philadelphia	Flushing....	P. Dover,	IMPERIAL	—	—	Tr. on Lakes btn.
AUREOLE	Barry	Batoum	June 16	JOANNIS COUTZIS	Taganrog ..	Piræus.....	Arr. June 27
AZOV.....	—	—	L. Honolulu,	J.B.AUG.KESSLER	Alexandria..	Sumatra	P. Eden,
BAKU STANDARD	Ibrail	Rouen	June 2	—	—	—	May 8
BALAKANI	Philadelphia	London	Arr. July 3	JAMES BRAND....	Tyne	Philadelphia	P. Dunnet Head
BATOUM	Tyne	Philadelphia	L. June 22	—	—	—	June 28
BAYONNE	Philadelphia	Savona	L. June 26	KURA	Valla	Blyth	Arr. July 3
BEACON LIGHT..	Port Arthur	London	P. Del. Break.,	LA CAMPINE	Antwerp	Philadelphia	Arr. June 25
BEME	Rangoon....	Bombay	June 20	LA FLANDRE	Philadelphia	Ghent	Arr. July 4
BLOOMFIELD	New York ..	Bombay	L. June 27	LA HESBAYE	Antwerp	Batoum	Arr. Const'ple,
BORJOM	—	Batoum	P. Sagres,	—	—	—	June 27
BRILLIANT	Philadelphia	Rotterdam..	L. June 22	LA MADALEINE..	St. Louis	Antwerp	Arr. June 11
BROADMAYNE	Rouen.....	Tyne	L. June 26	—	(Rhône)	—	Arr. May 13
BULLMOUTH	Palembang..	Singapore ..	P. Del. Break.,	LA VIGUESA.....	Marcus Hook	Gijon	—
BULYSESSES	Hamburg ..	Cardiff	June 20	LACKAWANNA...	Bangkalis ..	—	At Las Palmas,
BURGERMEISTER	Stettin.....	Philadelphia	L. June 27	—	—	—	July 2
PETERSEN	—	—	—	LE COQ	Philadelphia	Blaye	P. Del. Break.,
CADAGUA	Marcus Hook	Corunna	L. June 29	—	—	—	June 13
CALCUTTA (Br. bq.)	San Francisco	Shanghai ..	Arr. Port Said,	LOUTSCH	Messina	Novorossisk	Arr. Const'ple,
CARDIUM	Singapore ..	—	June 24-25	—	—	—	May 5
CAUCASIAN	Philadelphia	London	Arr. May 19	LUCERNA	Tyne	Philadelphia	P. Butt of Lewis
CHARLOIS	Kustendje ..	Antwerp	L. June 25	—	—	—	June 25
CHESAPEAKE	New York ..	Liverpool ..	Arr. June 16	LUCIFER	Philadelphia	Hamburg ..	L. June 25
CHESTER	Antwerp	Batoum	Arr. July 3 & sd.	LUCIGEN	Batoum	London	Off I. of W.,
CIRCASIAN	—	—	same day	—	—	—	July 5
PRINCE	—	—	Arr. July 1	LUCILINE	Batoum	Rouen.....	Arr. July 2
CLAM	Singapore ..	—	P. Dunnet Head,	LUMEN	Bergen.....	Tyne	Arr. June 21
COWRIE	Hamburg ..	Barrow	June 28	LUX	Tyne	—	P. Tarifa,
CYMBELINE	Barry	Novorossisk	At Gibraltar,	—	—	—	June 29
CZAR NICOLAI II.	Batoum	Hamburg ..	June 30 & July 1	MAKKAVEI.....	Batoum	Odessa	L. Apr. 21
DAGHESTAN.....	Batoum	Hamburg ..	Arr. June 7	—	Venice.....	Batoum	L. June 30
DAKOTAH	Shanghai ..	San Francisco	L. June 25	MANHATTAN	Philadelphia	Malmø	L. July 1
DELAWARE	Avonmouth	Philadelphia	At Cardiff,	MANNHEIM	Kustendje ..	Leghorn ..	P. Zea,
DEUTSCHLAND ..	Rotterdam..	New York ..	June 15	MARGARETHA ..	—	—	June 3
DIAMANT	Tyne	Philadelphia	P. Gibrat tar,	MEXICAN PRINCE	Cienfuegos..	—	L. June 20
ELAX.....	Shanghai ..	—	June 29	MIRA.....	Singapore ..	Balekappan	Arr. June 19
ELISE MARIE	Philadelphia	Hamburg ..	Arr. June 29	MUREX	Balekappan	Hong Kong	Arr. July 1
ENERGIE	Philadelphia	Hamburg ..	P. Constanti'ple,	NARRAGANSETT	New York ..	London	P. Scilly,
ERIVAN	Manchester	Philadelphia	July 2	—	—	—	July 5
EUPLECTELA	Philadelphia	Manchester	Arr. June 8	NERITE	Balekappan	—	L. May 31
EXCELSIOR	Rotterdam..	New York ..	Arr. New York,	NEW YORK	New York ..	Southampton	Arr. July 1
EZIO	—	—	June 25	OCEAN	Amsterdam	New York ..	P. Scilly,
FRANCE MARIE ..	Philadelphia	Palma	P. Prawle Pt.,	—	—	—	June 24
GEESTEMUNDE ..	Philadelphia	Gothenburg	June 26	ORANJE PRINCE	Tyne	Manzanillo	L. June 25
GENESSE	Tyne	New Orleans	P. Dunnet Head,	ORIFLAMME.....	Rouen	Philadelphia	P. Scilly,
GLORGIAN	Tyne	Philadelphia	June 30	—	—	—	June 28
KINCE ..	—	—	P. Butt of Lewis,	OSCEOLA	Boston	Brunswick ..	Arr. May 31
—	—	—	June 27	OTTAWA	Tampico....	Philadelphia	L. June 17
—	—	—	L. June 21	OURAL	Batoum	Thameshaven	P. Southend,
—	—	—	—	—	—	—	July 4
—	—	—	—	PALEMBANG	Singapore ..	Foochow....	L. May 31
—	—	—	—	PAULA.....	New York ..	Lisbon.....	L. June 29
—	—	—	—	PECTAN	London and	Galveston ..	P. Scilly,
—	—	—	—	—	Emde	—	June 24
—	—	—	—	PENNOIL	Rotterdam..	Tyne	Arr. July 4
—	—	—	—	PERLAK	Calcutta	Aros Bay ..	L. June 6
—	—	—	—	PHOEBUS	Hamburg ..	New York ..	Arr. July 2
—	—	—	—	PINNA	London	Tyne	L. July 3
—	—	—	—	POTOMAC	Belfast	Philadelphia	Arr. June 21
—	—	—	—	PROMETHEUS ..	Hamburg ..	New York ..	Arr. June 30
—	—	—	—	PRUDENCIA.....	Middlesbro'	Sulina	Arr. June 26
—	—	—	—	RION	Penarth	Batoum	Arr. Const'ple,
—	—	—	—	—	—	—	June 29
—	—	—	—	ROCK LIGHT	Port Arthur	—	L. June 27
—	—	—	—	—	(Texas)	—	—
—	—	—	—	ROSSIJA	Tyne	Batoum	Off Ushant,
—	—	—	—	—	—	—	June 19
—	—	—	—	ROTTERDAM	New York ..	Copenhagen .	L. June 28
—	—	—	—	(Now C. F. Tietgen)	—	—	—
—	—	—	—	RUSSIAN PRINCE	Boston	Havana	L. June 28
—	—	—	—	SALAHADJI	Port Soesoe	Singapore ..	Arr. June 4
—	—	—	—	SEMINOLE.....	Murqan ..	Calcutta	Arr. June 25

Vessel.	From.	For.	Latest Date and Position.
SILVERLIP	Cardiff.....	Borneo	At Table, June 13
SINGU	Rangoon....	Marmugao ..	L. June 7
SNOWFLAKE	Port Arthur (Texas)	Antwerp	Arr. July 3
SOPHIE	Venice.....	Batoum	L. June 29
SPONDILUS	Tyne	Singapore ..	Arr. Port Said, June 17
STANDARD	Philadelphia	Stockholm ..	P. Butt of Lewis, July 1
STROMBUS	Singapore ..	—	L. May 19
SURAM	New York ..	Hull.....	P. Lizard, July 4
SUWANEE	London	Kustendje ..	P. Sagres, July 3
SVIET	Batoum	Odessa	L. June 1
TELENA	Hong Kong	Aroe Bay ..	Arr. July 1
TEREK.....	Port Arthur (Texas)	London	P. Prawle Pt., July 4
TIFLIS	Batoum	Antwerp	P. Consti'ple, July 2
TIOGA	—	—	In Pt. Liverpool, June 25
TONAWANDA	Newcastle .. (N.S.W.)	San Francisco	Arr. June 16
TROCAS	Shanghai ..	—	L. July 3
TURBO	Amsterdam	Philadelphia	Off I. of W., June 23
TUSCARORA.....	Calcutta	San Francisco	Arr. June 28
TWINGONE	Rangoon	Madras	L. June 25
VEDRA	Barry	Batoum	P. Barry Island, July 2
VILLE DE DIEPPE	Dieppe	Havre	Arr. Apr. 28 in pt. June 29
VILLE DE DOUAI	Philadelphia	Rouen	P. Scilly, July 4
VOLUTE	Soesoe.....	Singapore ..	L. Singapore, June 30
WEEHAWKEN	Barrow	New York ..	Arr. June 29
WILLKOMMEN ..	Philadelphia	Arhus	L. June 28
WINNEBAGO (late Kinsman).	San Francisco	Shanghai ..	L. June 19

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

July 6th, 1906.

Refined oil is somewhat easier in price, the latest quotations being:—Roumanian, 5 $\frac{3}{4}$ d.; American, 6 $\frac{1}{4}$ d.; Water White, 7 $\frac{3}{4}$ d.

LUBRICATING OILS

are unchanged as follows:—

- American pale, £7 to £9 10s.
- American dark cylinder, from £7 2s. 6d.
- American filtered cylinder, from £11.
- No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine is easier, being quoted for Spot, 44s. 9d.; August to December, 43s.

LIVERPOOL OIL MARKET.

July 4th.

Refined oils are quiet, and sellers now quote 5 $\frac{7}{8}$ d. for Russian, Galician or Roumanian; and 6 $\frac{3}{8}$ d. to 7 $\frac{7}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, July 4th.

Refined, in cases, is firm at 10.30; Standard White, 7.60; Credit balances, 1.58c.

PHILADELPHIA, June 21st.

Standard White is quoted at 7.55.

RUSSIA.

BAKU, July 2nd.

The Baku oil market is very firm. The prices are: Light crude oil, spot, 26 $\frac{1}{2}$ copecs per pood; kerosene, in waggons, spot, 28 copecs; kerosene in ships, delivery during navigation, 25 copecs; residuals in ships, spot, 27 $\frac{1}{2}$ copecs.

BELGIUM.

ANTWERP, June 26th.

The petroleum market is unchanged. Price of Standard White, spot, 19 $\frac{1}{2}$ francs per 100 kilos.; July, 19 $\frac{5}{8}$ francs, and four last months of the year 20 francs.

FRANCE.

PARIS, June 26th.

Illuminating oil is quoted in bulk, in whole tank waggons, 20.25 francs per hectolitre; spirit, 25.25 francs per hectolitre. Special white oil, 28.25 francs per hectolitre.

GERMANY.

HAMBURG, June 30th.

The kerosene market is firm. The price of American Standard White is 7.10 marks per 50 kilos.

ROUMANIA.

June 23rd.

Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs.	...	3.50-3.70
Refined oil, exclusive of taxes	...	9.00- —
Motor benzine, including taxes	...	16.00-18.00
Benzine, doubly refined	...	24.00-25.00
Residuals in tank waggons, at refinery	...	3.00- —
Paraffin	...	120.00-125.00
Lubricating Oils —		
Agricultural...	...	30-32
Prime	...	35-37
Extra	...	40-42
Royal	...	45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilos

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.00
Benzine, sp. gr. 0.710-0.715	11.00-12.00
„ sp. gr. 0.720-0.725	8.00- 9.00
„ sp. gr. 0.735-0.760	6.00- 7.00

INDIA.

BOMBAY, June 16th.

Petroleum steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	.. ..	Rs. 6 0 2
„ Chester, 125 deg.	.. ..	4 8 0
„ Monkey Brand, 125 deg.	.. ..	4 2 2
„ Bulk, 125 deg. (in local made tins)	.. ..	3 10 0
„ „ 125 deg. (8 Imperial gallons)	.. ..	3 0 0
„ "White Camelia" brand, 125 deg.	.. ..	4 0 2

The Asiatic Petroleum Company, Limited.

Current rates are:—

Borneo oils, in tins, per pair	.. ..	3 2 0
Sumatra "Rising Sun," bulk, per unit	.. ..	3 0 0
„ „ tins, per pair	.. ..	3 10 0
Silverlight cases, per case	.. ..	4 8 2
Russian, "Anchor," cases	.. ..	4 14 0

Messrs. A. I. Mantacheff & Co.

Current rates for Russian Oil are:—

- Ram Brand, cases, Rs. 4-4-0 nett, ex-Bombay godowns (small lots).
- Ram Brand, cases, Rs. 4-3-6 nett, ex-Bombay godowns (big lots).
- Ram Brands, tin, Rs. 3-12-0 nett, per pair, ex-Bombay godowns.
- Ram Brand, bulk, Rs. 3-2-0, per 8 Imperial gallons, ex-Bombay godowns.

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED JUNE 25TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
June. LONDON—				
19	Fielder, Hickman and Co...	Lub.	8,400	New York
19	Anglo-American Oil Co. ..	"	32,800	Philadel.
20	London Oil Storage Co. ..	"	1,725	Hamburg
20	W. Balchin	"	5,000	Philadel.
20	Mordaunt Bros.	"	25,000	"
20	Consolidated Petroleum Co.	Gas	130	Constantza
21	Asiatic Petroleum Co. (Cowrie)	Benz.	1,106,700	Pulo Samboe
21	"	"	46,500	"
22	"	"	635,500	"
22	London Oil Storage Co. ..	Lub.	240	Hamburg
22	Anglo-American Oil Co. (Suwanee)	Naph.	419,260	Kustendje
22	"	Benz.	172,720	"
22	"	Lamp	432,325	"
22	J. W. Baker	Lub.	4,900	New York
23	A. Brown and Co.	"	10,000	Hamburg
23	J. R. Francis and Co. ..	"	2,420	Philadel.
25	J. Barber and Co.	Lub.Gr.	800	Hamburg
25	Grindley and Co.	Lub.	6,000	Philadel.
25	T. H. Lee	M.Lub.	120	Hamburg
25	Leach and Co., Ltd. ..	Crude	150	Ghent
LIVERPOOL—				
19	Midland Railway Co. ..	M.Lub.	570	Philadel.
20	Pickfords	"	30	Hamburg
20	"	L.Paste	330	"
21	Worthington and Boler ..	M. Lub.	400	Philadel.
21	Crew, Levick and Co. ..	"	4,340	"
21	W. B. Dick and Co. ..	"	9,210	"
21	Geo. B. Taylor	Mill Gr.	8,520	"
22	Meade-King, Robinson & Co.	M.Lub.	44,000	"
22	"	Resid.	9,280	"
23	R. P. Houston and Co. ..	M.Lub.	100	Hamburg
23	George B. Taylor	"	48,400	New York
23	Meade-King, Robinson & Co.	"	10,900	Hamburg
23	" .. (Erivan) ..	"	155,610	Batoum
23	Bramwell Fern and Co. ..	"	149,400	"
BRISTOL—				
14	Pickfords	M.L.P.	320	Hamburg
20	H. R. James and Sons ..	Lub.	2,000	New York
20	W. Smith and Co.	"	7,000	"
22	"	"	36,400	"
22	H. R. James and Sons ..	"	14,200	"
23	Pickford's, Ltd.	L.Paste	350	Hamburg
CARDIFF—				
25	Homelight Oil Co. (Aureole)	Refined	675,000	Batoum
GRIMSBY—				
19	J. Sutcliffe and Sons ..	Lub.	2,110	Antwerp
HULL—				
19	Thos. Wilson, Sons and Co.	"	2,400	Hamburg
20	"	"	960	Antwerp
20	Hull and Neths. S.S. Co. ..	Tar Oil	1,440	Rotterdam
21	Wilson, Sons and Co. ..	Lub.	640	Hamburg
22	"	"	600	"

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
22	Meade-King, Robinson & Co.	Naph.	12,000	Rotterdam
23	Hull & Netherlands S.S. Co.	Tar oil	1,440	"
23	Wilson, Sons and Co. ..	Lub.	480	Antwerp
MANCHESTER—				
19	J. T. Fletcher and Co. ..	M.Lub.	10,640	"
20	Manchester Liners	Resid.	2,400	Montreal
23	Bramwell Fern and Co. ..	M.Lub.	430	Antwerp
NEWCASTLE—				
20	Tyne-Tees S.S. Co.	"	365	Hamburg
20	C. Hassell and Son	"	111,560	New York
21	Furness, Withey and Co. ..	"	22,800	"
23	Tyne-Tees S.S. Co.	"	2,360	Hamburg
25	"	"	1,200	Antwerp
GLASGOW—				
19	Anchor Line	"	800	New York
19	Clyde Shipping Co.	"	1,980	Antwerp
LEITH—				
20	Henderson and McIntosh ..	Lub.	17,800	New York
21	"	"	95,920	Philadel.
23	W. G. Yool and Co.	Lamp	2,180	Hamburg
23	J. Currie and Co.	Lub.	1,030	"
BELFAST—				
19	G. Heyn and Sons	"	640	Riga
			4,380,325	
Deduct to correct—				
LONDON—				
30/5	Ang.-Amer.Oil Co.(Balakani)	Gas	787,800	
Total for the Week ..			3,592,525	

FOR THE WEEK ENDED JULY 2ND, 1906—

June LONDON—				
26	H. Funck and Co.	Lub.	10,000	Marseilles
28	Schliemans Oil Co.	"	1,200	New York
28	Anglo-American Oil Co. ..	"	33,960	"
28	London Oil Storage Co. ..	"	2,190	Hamburg
28	G. W. Sheldon and Co. ..	"	450	Antwerp
30	London Oil Storage Co. ..	Lamp	7,200	Philadel.
30	Worthington and Boler ..	Lub.	4,400	Baltimore
30	T. S. Harris and Co.	"	4,800	"
30	Mordaunt Bros.	"	2,400	New York
30	G. and H. Green	"	3,300	"
July.				
2	Lon. and Thames Haven Oil Wharves (Oural)	"	742,500	Batoum
2	Produce Brokers	"	4,800	New York
2	G. W. Sheldon and Co. ..	Lub.Gr.	1,250	"
2	London Oil Storage Co. ..	Lub.	1,550	Hamburg
2	A. Brown and Co.	"	680	"
2	G. W. Sheldon and Co. ..	L.Gr.	1,500	Antwerp

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DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
June	LIVERPOOL—			
26	Wakefield and Co. ..	M.Lub.	250	Hamburg
27	Liverpool Storage Co. ..	"	1,000	New York
26	Meade-King, Robinson & Co.	Resid.	8,000	Trieste
27	"	Lub.	2,400	Baltimore
27	Cunard Steamship Co. ..	"	2,020	New York
27	Burnaby and Chantrell ..	"	500	"
28	R. Lees and Co. ..	"	400	Baltimore
28	Geo. B. Taylor ..	"	33,400	Philadel.
28	Meade-King, Robinson & Co.	"	2,000	"
28	"	Resid.	7,000	Trieste
30	Crew, Levick and Co. ..	Lub.	13,240	Philadel.
30	W. B. Dick and Co. ..	"	8,330	"
30	Anglo-American Oil Co. (Chesapeake)	Lamp	666,240	New York
30	"	Gas	737,380	"
30	"	Spirit	8,000	"
July.				
2	G. Gibson and Sons ..	Lamp	2,050	Boston
2	Liverpool Warehousing Co.	M.Lub.	9,570	Beaumont
June.	BRISTOL—			
27	Pickfords, Ltd. ..	Lub.	860	Hamburg
27	Heaton and Co. ..	"	410	Antwerp
27	Anglo-Bosphorous Oil Co. ..	"	2,000	Hamburg
28	W. G. Clarke ..	M. Colza	920	Antwerp
28	W. A. Lewis and Co. ..	Lub.	1,000	Hamburg
28	Anglo-Bosphorus Oil Co. ..	"	4,000	"
	GOOLE—			
28	Goole Steamship Co. ..	"	600	Antwerp
	HULL—			
27	Wilsons and N.E. Railway Shipping Co.	"	560	Hamburg

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
June				
27	Hull and Nether. S.S. Co.	Tar Oil	3,640	Rotterdam
27	Anglo-American Oil Co. ..	Lub.	35,450	New York
27	Thos. Wilson, Sons and Co.	"	3,400	"
28	Helmsing and Son ..	"	400	Riga
	MANCHESTER—			
26	Meade-King, Robinson & Co. (Erivan)	M.Lub.	230,500	Batoum
26	Bramwell, Fern & Co. ..	"	227,730	"
27	Homelight Oil Co. (Aureole)	Lamp	708,910	"
27	Worthington and Boler ..	Lub.	1,000	Philadel.
28	R. Steinmann and Co. ..	"	1,200	Hamburg
	STOCKTON—			
27	J. J. Sutherland ..	"	320	Antwerp
	SWANSEA—			
28	Burgess and Co. ..	"	9,000	New York
	GLASGOW—			
26	J. and A. Allan ..	"	40,040	Philadel.
26	"	M. Colza	9,000	"
26	Anchor Line ..	Lamp	5,000	New York
26	"	Lub.	86,200	"
	GRANGEMOUTH—			
26	J. Currie and Co. ..	Tar oil	400	Hamburg
26	"	Lub.	1,680	"
26	"	"	10,960	"
	LEITH—			
28	J. Currie and Co. ..	"	2,000	"
	Total for Week ..	"	3,703,140	
	Total for the past Fortnight ..	"	7,295,665	

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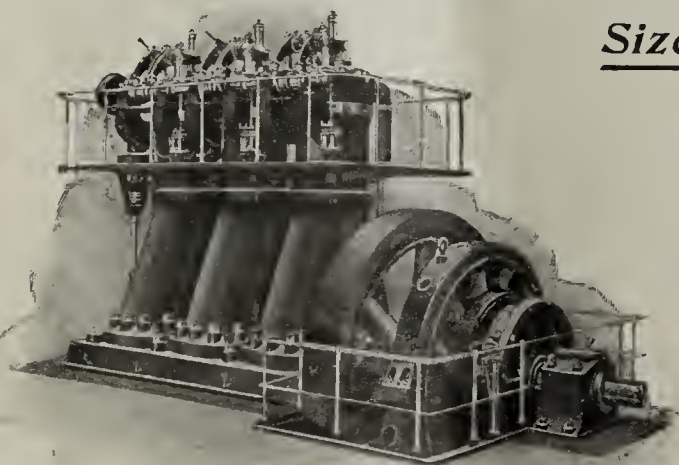
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

JULY 21ST, 1906.

No. 377.

Editorial Notes.

Liquid Fuel for Cuba. The Cuban Assembly, by the vote of both houses, has passed a Bill removing the tariff restrictions and impositions upon crude oil.

It will be known that in most French and Spanish countries it has been usual to place a tax upon the refined oil though admitting the crude oil into the country free of charge, the idea being of course to give every inducement to the oil refining industry at home. Since Cuba, however, became freed from Spanish influence, it has been customary to levy a duty upon crude oil simply for revenue purposes. Of late the attention of the Cuban sugar growers and manufacturers has been turned to the convenience of liquid fuel and its great economy, if only the tax upon the fuel could be removed, and so most assiduous efforts have been put forward in order to bring this about, several of the Texas producing companies having had representatives pushing forward the claim for duty free crude oil for quite a long time. Their efforts have been crowned with success, and there is now genuine cause for rejoicing by those associated with oil interests.

The Baku Coming Sales of Oil Land. Considerable interest is being centred in the forthcoming sales of Government petroliferous land at Baku, and in view of the high prices which are now ruling for crude oil at Baku, some very keen bidding may be expected. On some hands it is said that the Government may obtain some rather large royalties, but it is to be hoped that these royalties will not be brought up to a level which will hamper the proper development of the industry. At the same time, the releasing of fresh lands for exploitation is very welcome news, for some of the older plots are shewing signs of exhaustion, and therefore, in order to maintain the normal output of the oil fields, the drilling of fresh areas has become an absolute necessity.

The Roumanian Export Trade. The figures shewing the various quantities of petroleum products exported from Roumania during May are strong evidence of the great development which is overtaking that country's export trade. In every class of product the increase between the figures for May, 1905, and those for May of this year is most marked, but especially so in the case of illuminating oil which, though they were only about 10,000 tons a year ago, reached almost 30,000 tons during May of this year. The exports of crude oil, distillate, gas oil, etc., have doubled themselves when compared with the figures of a year ago, while in the exports of benzine there has also been an increase of nearly 100 per cent. There's no doubt about it, the Roumanian export trade is now making wonderful progress, especially so in regard to England, for we are now Roumania's largest customer.

Continued Progress in Borneo. The petroleum industry in Borneo seems to have now reached such a stage that congestion of storage is the one great difficulty which the producers have to face. In another part of this issue we publish the statistics of the production of the Nederlandsche Industrie en Handel Maatschappij, the subsidiary company of the Shell Transport and Trading Co., which is conducting the operations in the Borneo fields, and from these figures one can obtain a pretty good impression of the condition of things that is now prevailing in these prolific territories. For quite a long time now the yield of the wells has been taking most pronounced leaps forward, until at the present time a state of congestion has been brought about which is, we should imagine, almost—if not totally—without parallel in the petroleum industry of the world. From the official figures which have been furnished us we gather that out of a total production during the past three months of about 92,000 tons no less than 20 per cent. has had to be destroyed, the quantity being made up of the various products of petroleum, as well as the crude oil itself. During the first half of this year out of a total production of slightly over 200,000 tons, the quantity destroyed has been almost 40,000 tons. Yet in spite of this the total stocks above ground to-day of both crude and products are considerably more than double the quantity of stocks a year ago, a fact which, especially when taken in conjunction with the wholesale destruction that has been necessary, points most forcibly to Borneo's continued progress.

The American Oil Fields in June. In our details concerning the operations in the American oil fields during May, we pointed out that there had been a general increase in activity during the month in the older producing oil fields. From the latest information to hand, it appears that during the past month, the fields passed through a continuity of that activity, and at the close of the month it gave every promise of continuing for a long time. Though the production per well cannot in any way compare with that of years gone by, it is gratifying to find that for the past month it was slightly higher than the average for the preceding month—a gratifying sign, seeing that the daily yield of wells in the high grade producing regions has been going from bad to worse for some months past. The details of June's operations will be found elsewhere.

Oil to the Fore. It is indeed strangely curious to note how one system of illumination for the lighthouses around our coasts has been succeeded at various times by another in a sort of cycle. The oil illuminant was very much in popularity years ago, but with the advent of what was then considered by the Trinity House authorities a more perfect light, it was replaced in many instances by gas, and in turn this illuminant too had to give way

to the electric light. The three illuminants have thus been fairly tried on their merits, and now both gas and electric light have been discarded in favour of oil which will in future be used in all the lighthouses under the Trinity House authorities. But the oil will not be used in its old form, for owing to the discoveries that have been made during the past few years, it will be utilised in an incandescent form, giving a vastly superior light and allowing a great reduction in the consumption. Upon page 45 of this issue we refer to the subject.

THE GALIZISCHE KARPATHEN PETROLEUM GESELLSCHAFT.

AN UNSATISFACTORY YEAR.

The Galizische Karpathen Petroleum Gesellschaft has just published their balance sheet for the financial year ended 30th April. The results achieved are rather unsatisfactory, shewing a loss for the year of 631,554 kronen, which is covered by the reserve fund.

The profit and loss account shews a gross profit on the business in Galicia of 3,614,194 kronen, a decrease of 1,481,556 kronen against the preceding year. With the balance of 99,291 kronen carried forward from last year, and the amount of 706,043 kronen received as dividend from the Apollo Refinery Co. and the Nurnberg Co., the total profit amounts to 4,413,527 kronen, a decrease of 1,515,719 kronen against the previous year. Against this, working expenses stand at 2,489,347 kronen, interest 523,302 kronen, taxes 666,388 kronen, insurance 74,341 kronen, doubtful debts, 301,293 kronen, depreciation 990,404 kronen—in all 5,043,500 kronen.

These unsatisfactory results are ascribed by the directors mainly to the over-production prevailing in Galicia, the small prices realised for oil exported abroad, and more particularly to the fact that the production on the company's properties declined in the past financial year by 32,000 tons against the preceding year, whilst on the other hand the cost of exploitation had increased. The unfavourable conditions in Galicia justify the transference of many creditors to the doubtful debts account. After covering the past year's loss, the reserve fund stands at 4,306,625 kronen.

THE BATOUM PETROLEUM EXPORT TRADE IN MAY.

The results of the export operations of the port of Batoum in May are far from satisfactory. The total quantity of oil exported was only 2,665,000 poods. The absence of any demand for solar oil has contributed to the slackness of the trade, the smallness of which was also due to the stagnation in the case oil shipments. Kerosene distillate, which for several months had no demand, has again taken its place in the export trade in May.

The following are the figures of the arrivals of petroleum oils from Baku, shipments from Batoum and stocks at Batoum on May 31st:—

	Arrivals.	Shipments.	Stocks on June 1 (o.s.)
Refined Kerosene	1,243,000	1,397,000	1,663,000
Kerosene Distillate	—	325,000	16,000
Solar Oil	72,000	—	761,000
Machine Oil	830,000	684,000	483,000
Spindle Oil	38,000	118,000	60,000
Cylinder Oil	17,000	12,000	22,000
Vaseline Oil	—	19,000	47,000
Lubricating Oil Distillate	—	—	24,000
Residuals	145,000	110,000	332,000
Total	2,315,000	2,665,000	3,408,000

Of case oil there was exported only 297,000 poods against the formerly normal figure of 2,000,000 poods. Lubricating oils were in normal demand.

It will be observed that the arrivals of kerosene from Baku were very small. The pipe line delivered only 882,000 poods, which is barely one-fifth of its monthly capacity.

According to the countries of destination the exports in May were distributed as follows:—

	Poods.
To England	704,000
„ France, mainly distillate	730,000
„ Belgium and Holland	540,000
„ Germany	112,000
„ Odessa	107,000
„ Turkish and Balkan Ports (Case Oil)	197,000
„ Red Sea Ports	100,000
„ Other destinations	175,000
Total	2,665,000

DETAILS OF BAKU PRODUCTION AND BORING IN APRIL, 1906.

The following details of the Baku production of crude oil in April are supplied in the latest issue of the *Neftiannoie Dielo*:—

						PRODUCTION (in poods).				Average per Well per Day.
						By Baling.	By Spouters.	Casual.	Total.	
Balakhany .. ..	..	..	..	..	558	6,009,090	—	18,259	6,027,349	378
Saboontchi .. ..	..	..	..	..	503	13,741,085	952,500	302,502	15,006,087	1,027
Ramany .. ..	..	..	..	..	169	7,896,738	391,000	87,982	8,375,720	1,788
Bebe-Aibat .. ..	..	..	..	..	180	12,058,548	28,500	6,400	12,093,448	2,355
Total in April, 1906 .. ..	..	..	..	..	1,410	39,705,461	1,382,000	415,143	41,502,604	1,028
„ April, 1905 .. ..	..	..	..	..	1,530	44,434,088	2,438,400	322,954	47,205,442	1,063

Apart from the above, there were produced at Binagadi, from 12 wells, 32,714 poods of oil.

The largest spouters in April were:—Well No. 6, on Ter Akopoff's plot, No. 62, at Saboontchi, which yielded 725,300 poods; well No. 400, on Nobel's plot, No. 140, at Ramany, which produced 364,000 poods; and well, No. 369, on Nobel's plot, No. 51c. at Saboontchi, which produced 147,300 poods.

The condition of the oil fields on the 1st May (o.s.) is shewn in the following table giving the number of wells of various descriptions:—

				In Exploitation.	In Drilling.	Undergoing Deepening, Repairs, Cleaning, Trial Baling, etc.	Abandoned and Temporarily Inactive.	Total.
Balakhany .. ..	..	..	..	554	25	38	521	1,175
Saboontchi .. ..	..	..	..	491	61	94	880	1,548
Ramany .. ..	..	..	..	167	35	62	207	482
Bebe-Aibat .. ..	..	..	..	176	96	74	99	467
Binagadi .. ..	..	..	..	12	—	—	7	19
Total .. ..	..	..	..	1,400	217	268	1,714	3,691

The Baku Refining Industry in 1905.

The *Neftianoe Dielo*, in its most recent issue, contains a number of interesting statistics concerning the operations of the Baku refineries in 1905. The refineries are divided into two categories:—(1) Kerosene refineries, where the crude oil is distilled with a view to producing mainly kerosene and residuals, as well as some by-products, and (2) lubricating oil refineries, where the residuals are re-distilled with a view to produce various lubricating oils and greases. In the statistics the two classes are treated quite separately from one another.

(1) Kerosene Refineries.

The quantities of crude oil and other products submitted to distillation in 1905, compared with 1904, were as follows:—

	1905. Poods.	1904. Poods.
Crude Oil	285,750,219	471,626,809
Light Gasolene	2,073,947	1,931,614
Refined Kerosene	—	43,790
Light Solar Distillate ..	—	—
Heavy „ „	—	—
Residuals	—	526,265
Kerosene Distillate ..	805,732	511,487
Heavy Gasolene	—	—
Total	288,629,898	474,639,965

The products obtained by distillation were as follows:—

	1905. Poods.	1904. Poods.
Kerosene Distillate ..	67,637,730	145,430,298
Light Gasolene	10,253,635	10,795,435
Solar Distillate, Light ..	1,591,127	2,490,177
„ „ Heavy	—	82,970
Astraline Distillate ..	23,450	30,648
Pyronaphtha Distillate ..	184,755	148,381
Residuals	200,748,255	302,290,182
Benzine Distillate	93,634	84,707
Total	280,532,586	461,352,798
Loss in Distilling	8,097,312	13,287,167

The following quantities of oil were used as fuel in distilling:—

	1905. Poods.	1904. Poods.
Crude Oil	2,712,718	3,577,095
Residuals	4,446,416	955,349
Light Gasolene	3,509,335	4,891,716
Refined Kerosene	—	—
Light Solar Distillate ..	15,037	—
Heavy „ „	78,084	1,860
Kerosene Distillate ..	153,921	927
Total	10,915,511	18,025,094

The quantity of oils submitted to refining and that of refined products received were as follows:—

	1905.		1904.	
	Submitted to refining. Poods.	Refined Products received. Poods.	Submitted to refining. Poods.	Refined Products received. Poods.
Kerosene Distillate	64,904,153	62,990,812	145,832,212	141,343,264
Light Solar „	181,179	148,884	229,851	197,255
Astraline „	22,150	21,528	30,648	29,711
Pyronaphtha „	136,954	129,579	148,381	142,918
Total	65,244,436	63,290,803	146,241,092	141,713,148
Loss in Refining	—	1,953,633	—	4,527,944

The quantities of chemicals used in refining illuminating oils were as under:—

	1905.		1904.	
	Sulphuric Acid. Poods.	Caustic Soda. Poods.	Sulphuric Acid. Poods.	Caustic Soda. Poods.
For Kerosene	302,903	124,278	829,432	313,712
„ Light Solar Distillate	33,802	1,643	31,222	3,902
„ Astraline	492	51	767	75
„ Pyronaphtha	1,344	413	2,722	374
Total	343,541	126,385	864,143	318,063

(2) Lubricating Oil Refineries.

The quantity of residuals and other oils submitted to distillation in the lubricating oil refineries were:—

	1905. Poods.	1904. Poods.
Residuals	34,774,324	54,757,891
Heavy Solar Distillate ..	—	410
Cylinder Oil Distillate ..	35,117	65,341
Refined Machine Oil ..	—	54,925
Total	34,809,441	54,878,567

The output of distillates was as under:—

	1905. Poods.	1904. Poods.
Solar Distillate, Light ..	7,031,727	11,841,135
„ „ Heavy	3,169,699	3,364,479
Spindle Oil Distillate ..	1,022,427	2,119,856
Machine Oil Distillate ..	8,794,903	14,316,347
Cylinder Oil Distillate ..	398,547	516,194
Viscosine	15,686	57,547
Vaseline Distillate	73,800	133,520
Goudron	5,540,617	7,687,298
Lubricating Oil Residuals	7,030,740	11,655,176
Sabonaphtha	4,895	2,547
Total	33,083,041	51,694,099
Loss in Distilling	1,726,400	3,184,468

The following quantities of fuels were used in the distillation of lubricating oils:—

	1905. Poods.	1904. Poods.
Crude Oil	335,662	114,937
Residuals	4,146,367	5,436,423
Light Gasolene	228,298	494,171
Heavy Solar Distillate ..	644,713	748,324
Goudron	188,133	306,787
Kerosene Distillate	43,000	—
Lubricating Oil Residuals	—	42,580
Total	5,586,173	7,143,222

The following are the quantities of lubricating oils submitted to refining and of refined products received:—

	1905.		1904.	
	Submitted to refining. Poods.	Refined Oil received. Poods.	Submitted to refining. Poods.	Refined Oil received. Poods.
Spindle Oil	1,003,418	898,682	2,104,689	1,882,543
Machine Oil	8,540,134	7,688,589	13,178,300	11,816,498
Cylinder Oil	295,923	254,784	346,515	288,756
Total	9,839,475	8,839,355	15,629,504	13,987,797
Loss in Refining	—	1,000,120	—	1,641,707

The quantity of chemicals used in refining lubricating oils was as follows:—

	1905.		1904.	
	Sulphuric Acid. Poods.	Caustic Soda. Poods.	Sulphuric Acid. Poods.	Caustic Soda. Poods.
For Spindle Oil	32,875	5,745	79,657	9,663
„ Machine Oil	262,168	36,857	487,451	52,252
„ Cylinder Oil	47,069	3,958	76,675	2,901
Total	342,112	46,560	643,783	64,816

Manufacture of Benzine.

With a view to the production of benzine distillates there was submitted to distillation in benzine refineries 902,481 poods of light gasolene, and 5,200 poods of benzine distillate; in all, 907,681 poods, against a total of 1,184,806 poods in 1904. The output of the benzine still was as follows:—

		1905. Poods.	1904. Poods.
Benzine Distillate .. ..	..	255,164	381,467
Heavy Gasolene .. ..	..	601,905	744,034
		<hr/>	<hr/>
Loss in Distilling .. ..	..	857,069	1,125,501
		36,752	59,305

Of the benzine distillate obtained in 1905 264,774 poods were submitted to refining, against 332,609 poods in 1904. The quantity of refined benzine obtained was 257 049 poods in 1905, against 321,277 poods in 1904.

The quantity of chemicals used in refining benzine was, in 1905, 7,910 poods of sulphuric acid and 1,824 poods of caustic soda, against 7,532 poods and 1,616 poods respectively in 1904.

PETROLEUM IN NEW ZEALAND.

In several places in New Zealand, and notably at New Plymouth on the west coast of the North Island, and near Greymouth on the west coast of the South Island, there are indications that reservoirs of oil exist at considerable depths from the surface. In the New Plymouth district, oil was discovered near the sea coast, some miles from the base of the extinct volcano known as Taranaki, or Mount Egmont. The history of boring for petroleum in that district extends back to the year 1865. It was one of general failure. Further unsuccessful efforts were made to obtain British capital to continue the boring. Eventually a New Zealand syndicate was formed. A bore was put down in the vicinity of the abandoned workings to a depth of 905ft.; oil was struck, but water was also present in the bore, and as the water rose and fell with the tide, it was evident that there was a fissure running out to sea. Operations were continued in another direction, and a bore put down to 905ft. yielded a flow of 10 barrels a day. The continual falling in of a soft layer of "papa" rock, however, soon stopped the flow of oil. In 1896 a fresh bore was put down, and, at a level of 1,976 ft. a considerable flow of oil was struck; but again the water interfered with the flow, and, eventually, the derricks and works were destroyed by an explosion and fire. More recently the operations were continued, and, a few days ago, it was announced that all difficulties had been overcome, and that excellent oil, with a total absence of water, was flowing from the well. The first flow was at the rate of about 30 barrels a day, but there was a great quantity of mud and sand mixed with the oil. On April 30th, however, it was found that there was enormous pressure of gas, and that the oil was flowing at the rate of 400 barrels a day. The bore is down to a depth of 2,331 ft. The company has secured rights over 5,000 acres of land in the vicinity, and as the present storage capacity of 10,000 gallons has been almost filled, the well has, for the present, been sealed down. The company, however, intends to erect a refinery, and hopes within 18 months to have six other bores sunk and working. The company's expert anticipates a yield of 4,000 to 5,000 barrels a day from the present bore.

THE PETROLEUM INDUSTRY OF PERU.

Speaking in his annual report of the industries in Peru, the British Consul says that in addition to the London and Pacific Petroleum Co.'s works at Talara and Negritos, and those of the Peruvian Petroleum Syndicate, established at Lobitos, some 15 miles to the north of Talara, the latter of which is still in the development stage, a new company has been formed to work some deposits at Fernandez in the district of Mancora, on a property owned by Mr. Nicolal Talman. This concern is still in the initial stage of development, but promises fairly well. The money for working this concern is being found in Lima. The property is inland, about 20 miles from the coast, but with a steady fall to the sea, and should the boring give good results, the oil could be piped by gravitation to tankage, which would have to be erected close by the sea.

The output of the Talara Co. is from 3,000 to 4,000 tons of crude oil per month. They work a considerable extent of territory, own two tank steamers of about



DRILLING IN THE SEA.

3,000 tons each, and dispose of about one-half of their production of bulk oil in Callao, and the remainder in Caleta Buena, Chile, where a large and increasing demand for fuel oil exists.

Their production of refined oil is sold in Peru.

The Peruvian Petroleum Syndicate's property at Lobitos is in a very advanced stage of development. They have some 1,000 tons of oil stored in tanks, and during the course of the present year will doubtless commence shipments. New tankage, a wooden mole or pier, and other shipping facilities are projected.

A great number of petroleum lands in this department have been applied for during the past year. In the majority of cases such lands are being held for speculative purposes, and a large proportion of them revert after a time to the Government, the applicants failing to keep up their half-yearly payments to the Department of Mines.

THE RUSSIAN PETROLEUM AND LIQUID FUEL, COMPANY, LTD.



A Peep Behind the Curtain.

Mr. URQUHART'S REPORT SEVERELY CRITICISED.

During the past few days we have received a criticism upon the recently issued report of the General Manager of the Russian Petroleum and Liquid Fuel Co., Ltd., to which we attach the greatest importance, inasmuch as it is written by one of the members of the staff on the company's property who, judging even by the position he has occupied during the crisis, must possess so detailed a knowledge of the state of affairs upon the company's properties as to make his utterances of the greatest value.

In the letter forwarded with the criticism upon Mr. Urquhart's report, the writer, who joined the staff after Mr. G. Tweedy had resigned, explains the reasons which have led to his writing to us upon the matter in the following words: "As I find on reading over the General Manager's report for last year that it is not altogether in accordance with facts, and moreover, that there is no explanation given by him of the failure to shut off the water in the wells, notwithstanding the fact that every well was cemented, I consider it my duty, not only to disagree with what he writes, but also to expose for the sake of the shareholders that which is known here by everyone to be the real cause of the alarming difference in the figures of the production as compared with the time when the present General Manager took the properties over, and when the former manager worked the properties."

The writer then proceeds with his criticism, which is as under:—

It is a striking proof of how little is understood by the shareholders of the Russian Petroleum and Liquid Fuel Co. of the operations of their properties that the report for 1905, submitted by the general manager, has been allowed to pass unnoticed, but probably the interest incited by being told of Tartar risings, inter-racial fights, storms of disorder, revolutions, strikes, massacres and incendiarism has caused them to disregard investigation. That such twaddle has succeeded in averting attention regarding the real cause of the systematic falling-off in the production of the Russian Petroleum and Liquid Fuel Co. during the period of 1904 to 1905 is very apparent.

The management of the properties of this company has been changed thrice within the very short period of less than two years, a Russian holding it up to September of 1904, an Englishman till December of 1905, and at present it is again in the hands of a Russian. The general management has also undergone two changes, but it is more the Englishmen's management of the properties that concern us, and as the writer has had a practical insight into the *modus operandi* of the respective managers, he considers himself fully qualified to speak with authority in dealing with the subject matter of the general manager's report, which we shall consider.

Before proceeding, let it be stated here that it is not the mere impulse or the love for controversy that prompts me to make use of your pages, nor do I intend my observations to serve as elementary knowledge; on the contrary, I have too great a liking for truth to write more than one letter, which if not believed, at all events shall not fail to serve its purpose, namely, to give a true account of the mismanagement of the properties of the Russian Petroleum and Liquid Fuel Co. from September, 1904, until December, 1905. The report for 1905, as a common record of events, may be said to be a masterpiece, and certainly excels anything of its kind; but I am disposed to think that there are some of the shareholders who cannot very well dovetail a piece of history and reconcile it with the alarming change that has taken place in the figures of the production of their company, so it is to

these gentlemen that I direct my remarks, the justice of which will be seen by an analysis of the facts.

To read carefully what the general manager says about the falling-off in the production is to gather that though proper water shut off was formerly neglected, the principal cause is nevertheless due to inter-racial fights between Tartars and Armenians, strikes and disorders, and the awful incendiarism of August. While I would not for a moment argue that strikes and fights do not have a pernicious effect upon work in general—and I readily admit that neglect to properly shut off water is a real danger to an oil field—I am nevertheless far from agreeing that they are either separately or collectively the real cause of the enormous diminution in the production of the Russian Petroleum and Liquid Fuel Co., more especially so when it is remembered that all, with the exception of Armenian properties, laboured under the self-same conditions, and that the results were very different to those of Oleum. As for the Armenian properties, it may be said that they, for the most part, scarcely worked, therefore it is unfair to compare their productions with those of other firms, as the general manager has chosen to do in the former reports.

PRODUCTION.—It is difficult to reconcile the fact of a weekly production of 560,000 poods, got by the former management, which is blamed for neglecting to cement wells and shut off water, with the fact that the present management, during the first six months of 1905, cemented almost every baling and boring well, and as a result could only shew a production of something like 350,000 poods per week. I leave it to those enjoying the power of the five senses to judge between the merits of the two management, and I go further by asserting that those wells which were cemented ceased to give oil and gave nothing but water, while those which escaped cementing continued to give oil, which proves that the oil sources were shut off. In proof of the foregoing, it is sufficient to say that the present property manager is obliged to go deeper with almost all the wells cemented in 1905.

Now, in the enquiry through which we are passing, allusion has been made by way of comparison to shutting off water by cementation, and in doing so, I have touched the indirect cause of the difference in productions. Further, it is my duty to remove all difficulties which may seem to the casual reader as conclusive and insuperable.

1. Water in the oil wells at Bebe-Aibat is admitted by reliable experts to come from below.

2. A well may be cemented either between the casings or in the column. The latter process is of recent date, and if not properly carried out can be a source of great trouble, and even ruin a well.

3. Cementing a well can, and does have, as a result: (a) to shut off water; (b) to shut off oil; (c) to damage the well.

I leave it to those interested in the affairs of the company to enquire of the general manager if the source from which a weekly production of about 360,000 poods was received when taken over by him was shut off by cementation or not, and if not, to explain how it comes about that, after pouring thousands of barrels of cement into wells which were giving average productions they should cease to give oil within the space of twenty-four hours after cementation. He might also be asked to explain why well No. 27 is abandoned, and why well No. 61 which, during the strike in December of 1904 spouted periodically, gave absolutely no oil from that time until about a month ago.

I assert that the real cause of the fall in the production of the Russian Petroleum and Liquid Fuel Co.

was due to the following circumstances and facts:—

1. That the workmen, boring party, mechanics, fitters, and administration had no confidence in the property manager, and consequently that the latter did not enjoy the support of the men.

2. That the reason of the want of confidence in the property manager was stimulated by his uncouth treatment of the men, and by the more important fact of his insufficient knowledge of property administration and his inexperience in boring.

In proof of the foregoing, I distinctly join issue and subject the question to the test of facts.

The property manager, serving under the former administration, and whom the workmen respected and feared, was dismissed, and his discharge was brought about in the following manner. The new administration, in order to make room for an Englishman, offered the then property manager a salary less than he was receiving, which action was taken by the men as a proof that the new administration failed to find anything against his character. Of course, there was a lot of talk at that time of his dishonesty, but neither the company's representative from St. Petersburg nor the company's auditors could prove it; therefore, the workmen knew upon what grounds their new manager, an Englishman, was appointed, and they never forgot it, particularly the men belonging to the mechanical and tube shops.

These men defied the new manager on account of his vulgarity and obscene language, which he never failed to use when giving out orders. At this time a very strong move was being made by Government railway and public works officials to promote a better feeling between workmen and masters, and to suppress obscene language. Soon the entire property began to look upon the manager with disrespect. In December, 1904, a general strike took place, and although Oleum's men were not involved in the matter, their manager openly denounced them, of course employing the most obscene language to one and all. This, I would like to point out, was the second stage of Oleum's miscarriage.

The men became enraged at having to deal with such a manager, and formed a committee, nominating two of their number to do nothing else but look after the interests of the men, which they did by reporting to the Chief Engineer of the Government Mining Department all actions not in accordance with law committed by the manager.

This had the effect of causing the Chief Engineer of the Government Mining Department to make visits to Oleum's property almost every week, in order to pacify the men, so as to avoid further striking. At the same time the local manager and the town office administration were roused against their own manager, because of his unpopularity with the men. Mass meetings of the men were held every other evening at the mechanical and tube shops, and on one or two occasions the local manager came to the property and spoke with the men, who openly denounced the property manager in his own presence.

In the meantime the production was rapidly falling off, and cementation after cementation proved disastrous. The boring party, of which each master was formerly held responsible for his own wells, were placed under the supervision of one, selected from amongst them, which had the effect of causing them to lose all interest in the work, and this rightly accounts not only for the falling off in the boring of 1905, but also explains—

Firstly—Why so much time was lost in fishing for tools.

Secondly—Why so many instruments were left in the wells; and

Lastly—Why well No. 74 had to be abandoned.

Latterly, no one was trusted by the manager, and affairs drifted into such a state that everyone distrusted one another, and work was done in a half-hearted manner, while responsibility was shifted on to the shoulders of common labourers. Eventually the men became so exasperated that they almost ran the manager out of the property on a trolley. The Chief Engineer of the Government Mining Department also lost all patience,

and on one occasion, when asked by the workmen to compel the manager to issue pay books to the labourers, he openly declared that if the matter was not in order within 24 hours, he would lodge an official protocol against the company. Moreover, he announced that in future he would not recognise the manager as such, and requested the workmen to apply to the manager of "Soyous" with all their questions.

Thus the power of control and working of the properties was completely disorganised, and it is obvious, even to the most superficial mind, that under such unsettled conditions practical and serious work was out of the question. Let it be borne in mind also that this state of affairs was not general; on the contrary, it was peculiar only to Oleum, and continued, as I have already observed, from the strike of December, 1904, till the fire in August, 1905.

It was a matter beyond the comprehension of all serious thinking men in Baku that such gross mismanagement, to say nothing of the constantly falling production, the former of course being only too painfully manifest the cause of the latter, should have been suffered by the new management, which was supposed to have made a change for the better.

Even after the fire, when other companies' mechanics and fitters had voluntarily resumed work, Oleum's men refused to work until they had received official notification, and were paid for the time they remained idle. I mention this as a proof of the power and influence which the workmen had over the manager.

IMPROVEMENTS AND ADDITIONS.—The conclusion to be drawn from the general manager's remarks respecting the utilisation of electric power for baling and boring purposes is economy of ground. While it is true that the boiler plant is relieved by using electric motors, it is nevertheless equally true that the use of crude oil engines, now in great demand, gives the same advantage, and are far cheaper and more economical. An examination into the respective merits of the utilisation of electric power for properties as compared with crude oil engines, discloses, from a financial point of view, the following incontestible facts, which go to prove the shortsightedness of the policy of the new management.

The use of electric power causes the wells to be dependent upon the Power Co. (this is the most reputed of companies in Bebe-Aibat for strikes). When a strike takes place at the Power Co., the baling and other wells are immediately cut off for want of power, and the seriousness of a stoppage to a baling well is no difficult matter to imagine. This has happened frequently, in fact, only last week the employees of the Power Co. were again on strike for three days. Consequently, wells require to be fitted up with steam engines as well as electric motors, which procedure cannot be argued to be economical. The property, in using electric power, becomes a network of cables.

On the other hand, by using crude oil engines, it is only a strike of the company's own men that can stop them, and as they use as fuel the direct product, without such encumbrances as cables, the cost in every respect is undoubtedly cheaper, as can be testified by the increasing demand for them.

AIR COMPRESSORS.—As for the two air compressors, which we are told are more economical in working, it may prove interesting to know that they have not yet been worked, so therefore the deductions as to the economy can only be intended for the purpose of reports. It appears that in order to give a pressure of about 350 pounds of compressed air, a steam pressure of from 150 to 180 pounds is required, which the boilers at present in use are unable to give, as they are only tested to approximately 105 pounds.

The use of compressed air for the purpose of obtaining oil in the Bebe-Aibat or Balakhany oil fields is not nearly so practical as baling, and the proof of this can be judged from the fact that at present only three out of the 15 air compressors are in use at Oleum, and that it is a rare thing to find more than two compressors in any of the other than English companies. Air com-

pressors are only used by property managers when a well has a small diameter or is crooked, in which case baling is impossible. Mr. Mancho, who is undoubtedly the best authority on oil matters in Bebe-Aibat, if not Baku, does not have more than two air compressors, and their utility is only for the above-mentioned purposes.

For the general manager to say that compressed air is very useful where there is a good level of liquid is absurd, as it is common knowledge that baling in such a case is better, and there are numerous instances in Oleum where wells previously worked by air lifts give better results by baling. In conclusion, it can be safely said that Oleum is overstocked with air compressors.

INCENDIARISM.—I refute that the whole oil field district was practically destroyed, and point to the following properties, some of which completely escaped, while others were only partly damaged:—The Bibi-Eybat Co., Rothschild, Mirzoeff, Mussanogiev, Baku Oil Co. (Kokeroff), St. Petersburg, and the Baku Russian Co. (Bebe-Aibat).

The property manager of the latter of the above-named companies remained on the spot during the whole time of the fire, and his presence was unquestionably instrumental in saving fully three-fourths of the plant to his company. This cannot be said of the manager of the properties of the Russian Petroleum and Liquid Fuel Co.

The Baku Russian Co. was the first to commence baling after the fire, and had several of the wells repaired and was baling from them long before Oleum commenced to clear away the debris. Probably the reason of the production of crude oil being barely sufficient to provide Oleum with fuel ought not to be attributed so much to the enormity of the damage as to the fact that their mechanics and fitters would not resume work after the fire.

Referring to the damage to the plant, I would like to point out that only 10 derricks were left standing after the fire. In addition to these, the property office, the hospital and the stables were also completely destroyed. Most of the books, however, were saved, but, strange to say, the original boring reports were never recovered. There is a deeply-rooted belief here at Baku that Oleum's property was fired by their own men, and it was an open secret that the ground upon which the buildings was situated was wanted for boring purposes. I mention this in passing, as there is no allusion made to the above buildings in the report.

For the edification of your readers, I should also like to establish it as a fact that London and other directors, even though they be able to speak Russian, can be just as badly informed as to the real cause of a fall in the production of their company as the general manager himself can, and although London is considerably farther away from Bebe-Aibat than the town office at Baku, the difference lies in nothing else than the distance. In other words, it is not *visiting* the oil properties that gives a man a right to pass judgment upon the conduct of property management and talk of future prospects.

Finally, let it not be forgotten that anyone unacquainted with work on an oil property, whether he be the director, general manager or property manager, and even though he visits the properties every day, can never know anything of the *real cause*, just as it is impossible, even by running the child through a common school and supply the man with a newspaper, to make him intelligent.

French Capitalists in Roumania.—Messrs. Tassart and Galli, representing a group of French capitalists desirous of taking over the exploitation of the property of the Moreni-Ghizdoveni, have for some time been staying in Roumania investigating the property and arranging the preliminary details of the transaction.

THE CRITICISED REPORT OF MR. URQUHART.

For the information of our readers who have not the full report of Mr. Urquhart by them, we publish below a number of extracts from it upon which the criticism particularly bears. The extracts are as under:—

The storm of disorder and revolution which burst over Russia has left few industries untouched, and the Baku oil industry was unfortunately one of the greatest sufferers.

Commencing with the inter-racial fights between Tartars and Armenians in February, passing through a succession of strikes and disorders, our troubles culminated in the awful massacre and incendiarism of August last, when the whole oil field district was practically destroyed by lawless bands.

The wreckage was appalling, and only after many weeks of continuous labour was the property cleared sufficiently to begin reinstatement. Even then the damage done to the wells was so enormous that from August until the end of the year our production of crude oil was barely sufficient to provide ourselves with fuel. The air lift tubes in nearly all the compressor wells dropped down the casings, and much time was lost in recovering them.

The above unfortunate occurrences could not do otherwise than have a very bad effect upon the year's results, and is immediately seen in the figures of production, which amounted to only 13,845,789 poods for 1905, as against 29,205,903 poods for the previous year. Besides the stoppage after August, another cause contributing to this serious drop in production was the former neglect of proper water shut-off, which we are now doing our best to remedy. We must refer to one cause which would in any case have tended to reduce our production in the present year, *i.e.*, neglect in former years as to boring to the lower strata. However much we may regret having to pass an upper stratum, already largely exploited, but which may still give a fair amount of oil, it is not good policy to yield to the temptation to maintain a present production at the expense of the future, and thereby to allow our competitors to tap the lower virgin oil beds whilst we depend only on the higher strata. Our intention last year was to remedy this as much as possible by carrying our boring wells down with all speed to the deep levels, but the disorders and strikes so much curtailed the work that we were not able to fulfil all our programme. Thus five new wells, which were included in our estimates for 1905, were practically untouched at the end of the year.

The total depth bored during the year has been 950½ sages (including plot 4), as against 2,770 sages in 1904. The falling-off is of course accounted for by the practical cessation of all boring work after the riots and conflagration of August. Since then our attention was directed to clearing away the debris of burnt buildings and derricks and repairing engines, rigs and other machinery, and reinstating our damaged producing wells. Another great hindrance to the re-starting of boring work was the inability to replace our ruined machinery quickly, as all other producers were in similar need, and the engineering firms could not cope with the demand. It is only now that the boring work done in 1904 and the first half of 1905 is beginning to show some results in the production.

Three new wells were started during the year, *viz.*, Nos. 12, 13 and 14, and are being drilled by contractors. We have adopted the policy of giving out new wells to be drilled by contract, and the results so far have quite justified our action.

Owing to the impossibility of adding to our boiler plant without encroaching on valuable boring land, some other method of adding to the power necessary for new work of boring and baling was essential. We have, therefore, decided to utilise electric power supplied by the Bebe-Aibat Electric Power Co. Ten baling wells are being fitted up on this plan, which, when completed, should considerably relieve the boiler plant and economise valuable ground for boring purposes.

AIR COMPRESSORS.—Two air compressors have been added to the plant during the year. These new compressors differ from the old belt-driven type in being direct steam driven, and are more economical in working. The compressor plant now consists of 15 air compressors capable of compressing about 4,500 cubic feet of free air per minute. During the fires of August one compressor house containing three compressors was burnt, but fortunately the damage was chiefly confined to the building, and the compressors were affected by slightly. Although the utility of compressed air is very evident where there is a good level of liquid to be raised from a well, yet in other cases where the level is low great caution is necessary.

The many stoppages of work during the last year owing to labour troubles, and the final long stoppage after the August fires, cannot but have a bad effect (even if only a temporary one) on the wells by permitting the influx of water to assume large proportions. This is especially serious in the Bebe-Aibat field, where the water difficulty is a very real one. The result of all such stoppages is that some weeks may be necessary to pump out the accumulated water before the well returns to its normal producing state.

In the ordinary work of boring, the water difficulty is now always met by cementing the wells in order to shut off the water. The result of this policy, now generally recognised as indispensable, will be apparent as our new wells reach the deeper oil sources. With careful boring and proper water shut-off, there are many wells rapidly approaching the producing strata with good prospects, and other newer wells which in the more distant future will aid in increasing the production. Many of our wells at present producing are available for deepening.

THE DISTILLATION OF WIETZE CRUDE OIL.

A NEW METHOD.

In all the methods hitherto known for distilling crude petroleum, tar, or other complicated mixtures of high boiling substances there is an effort to restrict the decomposition of the component parts, especially the highest boiling ones, which in the case of petroleum are also the most valuable. The methods employed for this purpose consisted in distillation by introducing steam with the aid of a vacuum, which facilitates the distillation of the heavy fractions.

There is another method for distilling crude petroleum, by which the crude oil is vapourised by being sprayed against the walls of a superheated vessel, vacuum also being used.

With oils of American, Russian and Galician origin, these methods resulted in the production of very valuable high viscosity lubricating oils. With German crude oils, owing to their different chemical composition, these methods produce oils of low viscosity and but little value.

According to a statement made by Prof. Haepke, of Bremen, in the *Asphalt und Teer-Industrie Zeitung*, only the following products can be obtained from Hanover crude oil by the ordinary methods in use:—

	Per cent.
Benzine	1
Illuminating Oil, 1st grade	6
" " 2nd "	6
Spindle Oil	20
Machine Oil, No. 1	22
" " No. 2	22
Goudron	10

The goudron can be further separated into 70 per cent. of a paraffin—containing oil and 30 per cent. coke.

It is admitted that the machine oils are of low quality, and can only be used as lubricants for railway waggons.

By a special combination of already known methods, however, it has become possible to obtain valuable lubricating oils of high viscosity also from German crude oils. The method works as follows:—

A suitable distilling vessel is heated up to the temperature at which it is desired to distil the crude material. The temperature is regulated in each case according to the nature of the product to be obtained. A powerful vacuum arrangement is attached to the still, and for the more rapid distillation superheated steam or some other suitable gas is introduced in sufficient quantity. Then the crude oil is introduced into the still in the form of a thin jet. Under the conditions then prevailing all portions of the crude capable of evaporation are transformed into vapours, which are almost instantly forced out of the still and condensed in the usual way, or separated into fractions.

In distilling German crude oil the still has to be heated up to a temperature of 250 to 300° C.

German crude oil distilled in this manner yields 40 per cent. of cylinder oils of high viscosity together with considerable proportions of good machine oils. The loss in transforming the residue into coke is much smaller than by the ordinary methods.

An experimental distillation of Hanover crude oil of normal quality by the method described yielded the following results:—

First Experiment. Product.	Yield. Per cent.	Viscosity.			Flash Point.
		At 20° C.	50° C.	100° C.	
1 Cylinder Oil ..	40	—	55	42	262°
2 Dynamo Oil ..	26	17	33	—	172°
3 Middle Oil ..	12	2	—	—	125°
4 Illuminating Oil.	10	—	—	—	—
5 Coke	6	—	—	—	—
6 Loss	6	—	—	—	—
Second Experiment.					
1 Cylinder Oil ..	33	—	64	52	280°
2 Machine Oil ..	30	39	8	—	204°
3 Middle Oil ..	15	3	—	—	137°
4 Illuminating Oil.	10	—	—	—	—
5 Coke	6	—	—	—	—
6 Loss	6	—	—	—	—

Another advantage of this method is that it materially increases the output of the distilling plant.

ENGLISH OIL ENTERPRISE IN PORTUGAL.

According to the *Vossische Zeitung* an English company bearing the title of the Portugese Petroleum Syndicate, Ltd., has obtained a concession from the Government of Portugal to make experimental borings in a petroleum area which has recently been discovered near Torre Vedras, about 40 miles distant from Lisbon. At the same time the Government has granted permission for the importation, free of duty, of all the machinery required for the purpose of investigating the new oil sources.

THE ASSAM OIL COMPANY, LIMITED.

ANNUAL MEETING.

The eighth ordinary general meeting of the shareholders in the Assam Oil Co., Ltd., was held at Winchester House, Old Broad Street, E.C., on Wednesday, Lord Ribblesdale (chairman of the company) presiding.

The directors in their report for the year ended 31st December, 1905, stated that during 1905 satisfactory progress had been made at the drillery. Attention had been given in proving our oil-bearing lands, and with that end in view several experimental wells were being sunk in outlying districts. The company had also obtained from the Government a prospecting license over a large tract of country, and a well was being sunk on what was thought to be a promising site. The production of the old wells, continued the report, had been maintained, and the conditions on the main oil field shew a great improvement over previous years.

There have been some changes in the management of the refinery since the last report, and the general manager has been able to introduce economies in the process, which are proving a great benefit.

The war of rates in the Indian oil market continued until November, 1905, when a settlement was arranged between the two main competitors. The improvement in prices, which followed arrived too late, however, to affect the result of 1905, and the accounts shew a profit of only £10 007 15s. 10d. The directors regret the amount is not larger, but they consider in the circumstances prevailing, the result gives good promise of what may be expected under normal conditions. Out of the above profit it is recommended that £7,500 be written off to depreciation account, and that the balance be carried to profit and loss account, making, with the amount formerly at credit, a carry forward of £6,710 1s. 1d.

From the beginning of the present year there has been a marked improvement all round, and the directors look forward with confidence to the next result.

The directors greatly regret that owing to ill-health Mr. Charles Sanderson felt himself obliged to resign his seat on the board. The company has also sustained a further and very great loss in the death, on 4th June last, of Sir Charles Tennant, Bart. Both these gentlemen had been members of the board since the formation of the company, and during the seven years of its existence had devoted themselves with untiring zeal to its interests.

The Chairman, in moving the adoption, said: Since we last met we have to deplore the loss of a valued director in the person of Sir Charles Tennant, who had been identified with the company since its formation. In almost my last business conversation with him he insisted, with something of that almost intuitive knowledge which distinguished him, on the great hopes and great prospects of this company; and I venture to think that we shall find, in the sequel, that that intuition of Sir Charles will not have misled him. We have also lost from our board Mr. Charles Sanderson, who was a very valued friend and director; but, by his doctor's advice, he has been rather reducing his City work. With regard to the filling of these vacancies, the board are giving that matter their very careful consideration, and we have come to the conclusion that those vacancies must be filled up by gentlemen of industrial and specific experience and of connection with this particular industry. Turning to the balancesheet, you will see that the capital expenditure this year has been £34,204. Mr. Turner, at our meeting last year, prepared for you an expenditure, in all, of something like £65,000. At the time he spoke we had spent about £24,000, and to get all the work done that we had in hand I expect will take another £30,000, and, although it never does to be optimistic about the expenditure of capital, I have a more or less confident hope that when we have spent this sum of £65,000 on the work which we are now at, our capital expenditure will be closed until profitable results may justify further capital outlay. As to the

distribution, £23,500, roughly, goes to the drillery and £10,600 to the refinery. The drillery absorbed £12,300 for fresh plant from England and £11,200 for plant which we bought in India, and for local work. A large proportion of this heavy expenditure has been for what is known as stocking up. Digboi is a very outlandish place, and if everything has to be ordered it takes an enormous amount of time to get the orders carried out, and even then we run considerable risks in getting them executed up to time. In this, as in other businesses, delays have dangerous ends, and, as many things have to come from long distances, it is necessary that you should keep such things in stock. Experience convinces us of the advisability of carrying on the policy we have adopted, and it is a great encouragement to our able works manager out there. I may say that the increase in many of the stocks is responsible for the heavy expenditure on stocking up, and it provides us with material for two or three years to come; therefore you must carry your minds onwards for two or three years when looking at the figures charged against you in that account. With regard to the expenses on the refinery, these have been entirely devoted to the tightening up and consolidating and systematising which Mr. Turner and, I think, Sir Boverton Redwood spoke of last year as being of the essence of our making a successful business more successful than it is. We have sent out a sulphuric acid plant, which will result in a great saving in expense; we have also sent out a new tin-making plant and doubled our boiler and refrigerating capacity. Referring to the drillery, we talk about satisfactory progress, and I daresay you will like to have something more definite and descriptive than such a vague term as "satisfactory progress." I will try and tell you more about that. In an oil business one must look ahead. Hitherto we have confined our work almost entirely to one area of our ground, which, as you know, we have proved to be oil bearing; but the best of wells in the world run out, although I am glad to say, on a pretty fair experience, that Sir Boverton Redwood tells us that our wells seem to be, so far, an exception to this common experience. Be that as it may, we have been extending our activities very considerably, and last year Mr. Turner told you that we had applied for what is termed a "prospecting license."

The Government, since we met you last year, has granted us this prospecting license over a district about twelve miles long and two miles broad, running parallel with our present oil-bearing land. On it we are now putting down a test well, about a mile to the west of our yielding well, and the strata we have so far gone through are so similar to that met with in our own field which we have proved to be oil-bearing, that we have very good hope of striking oil in this new prospecting-licensed oil area. If we strike oil, the secretary, who is a very cautious bird, tells me that our fortunes will be made. That is a very large order, but there is no doubt that it will alter our position very much if we do. Then we have sunk a well about a quarter of a mile south of our other wells. We knew that if we were to find oil here we must go considerably deeper than we had done before; but we hoped that if we went this depth we could get it, and in both these speculations we have been proved to be right. We have got the oil in this well, and at a considerable depth, and I think the significance of this is great, because it proves that we have greatly increased the area of our proved territory. We are also putting down a couple of bores to the east of our main wells, and another about a mile to the west, to further and actively test our territory. The next paragraph in the report which calls for comment is that which states that "the production of the old wells has been maintained, and the conditions on the main oil field shew a great improvement over previous years." As to this, I may explain that our old wells, instead of giving in, are this year giving us 10 per cent. more oil than they produced last year. This is largely due to the wise reorganisation and systematising of our operations which was spoken of last year, and to the very great improvement which has been introduced

on the field by our present zealous manager in cleaning out appliances, and so on, because, as I once said, our wells are the victims of their own qualities—they cork so easily.

It is quite true that we have added another well to the number of our oil-bearing wells, and you might say that the 10 per cent. increase I am speaking of is due to that additional well. But that would be inaccurate, because we were getting a lot of "nullah" oil in 1905, of which there was none in 1906; so that the 10 per cent. increase is not due to the new well, but to the nullah oil. What I would lay great stress upon is that we are not only getting 10 per cent more of crude material out of our wells, but, by better processes, the same amount of raw material is producing 30 per cent. increase on our products all round. Our old wells are doing better. The one well added, which I have referred to, immensely increases our immediate oil territory, and there are several bores now down a considerable depth, some of which may give us oil any day, and all of which must strike oil, humanly speaking, before the end of the year; and, above all, the rate war is over, which means that the prices of kerosene are now 30 per cent. higher than they have been all through 1905. The only unsatisfactory part of the report is the fact that we are not able to give you a dividend. We have made a profit of £10,000 cdd; we are writing off over £7,000 for depreciation, and the balance we are carrying forward, and this gives us a balance in the profit and loss account, to start the next financial year with, of £6,710. I notice Sir Boverton Redwood concluded his observations last year by telling the shareholders that they might look forward with complacency to the value of their property. I can echo that remark; but I would substitute for complacency active and energetic hope and confidence. I have now to propose: That the report and accounts and balance sheet to December 31, 1905, be received and adopted," and I will ask Mr. Bowring to formerly second that resolution.

Mr. Thomas B. Bowring seconded the motion, which was agreed to.

The retiring directors and auditors were reappointed, and the proceedings terminated.

AMERICAN PATENTS GRANTED.

Oil Burner.—William F. Hogan, San Francisco, Cal.

An oil burner having in combination, concentric pipes for the passage of oil and steam, a cylindrical plug fixed to the end of the inner tube and having a smaller diameter than the outer tube, said plug having a head rectangular in cross section and the angles of which fit the outer tube at separated points, the straight outer sides of the head between the said angles forming segmental passages for the steam, said plug having a chamber at one end connecting with the oil pipe, and having an annular groove at an intermediate point with a radial hole therethrough leading the oil into the chamber between the plug and outer tube, a coupling on the end of the outer tube having an internal shoulder projected across the path of the steam and oil delivered through said annular chamber, and a burner-head and means connecting it to said coupling.

Apparatus for Separating Naphtha, etc., from Oil or Other Liquids.—Eugene R. Edson, Cleveland, Ohio.

Evaporating apparatus comprising a tank having a vapour outlet; a heating drum or heater arranged within the chamber of the tank and consisting of externally conical interiorly chambered sections arranged at suitable intervals vertically, with the interior chambers of adjacent drum sections in open relations with each other; means for conducting liquid from the lower end of the upper of adjacent drum sections on to the upper end of the lower of the said sections; a pipe communicating with the interior chamber of the lowermost drum section; means for draining from the tank any liquid descending or flowing from the lowermost drum section; an elbow secured to the top of the tank and forming an extension of the aforesaid outlet; a heating jacket surrounding the tank; and a pipe communicating with the chamber of the heating jacket and discharging into the interior chamber of the uppermost drum section and extending from the drum upwardly through the aforesaid elbow.

RUSSIAN AND ROUMANIAN NOTES.

Another Spouter.—Well No. 17 of the Campina-Moreni Co., situated on the Government plot at Moreni, has for some time been spouting, yielding considerable quantities of oil.

Fatal.—A fire broke out recently on the property of Messrs. Ruzicka, Elias and Taubes, and destroyed one derrick. Unfortunately, the fire also resulted in the loss of several lives.

More Constantza Tanks.—The Roumanian Government has resolved to construct two more tanks at Constantza, within the area reserved for the petroleum storage installations.

A Welcome Resumption.—Well No. 1 of the Campina-Moreni, which has been producing for nearly two years, has resumed spouting now, after having stopped flowing for a time.

Not Yet Successful.—The trial well, which is being drilled on a concession at Vulcana in the Dambovitz district, has reached a depth of 470 metres without striking any oil.

Flood and Fire.—A well of the Romano-American Co. at Bustenari has commenced spouting recently but caught fire. The derrick and machinery are now being repaired with all speed.

Roumanian Prices.—Prices on the Roumanian home market remain unchanged. Crude oil is in great demand. The crude oil output in June is expected to be, if not superior, at least equal to the May output, i.e., about 65,000 tons.

An Important Project.—It is asserted that Mr. A. Raky, founder of the Campina-Moreni and Regatul Roman companies, intends to apply for a concession to build a branch railway from Moreni to Baicoi, thus connecting Moreni within the general railway system of Roumania.

Chatma Concessions.—The following concessions have recently been granted for the exploitation of petroleum in the locality of Chatma, in the Tiflis district: to Councillor of State, P. Kasterin, Mr. F. Fustoff, and Mr. N. Fustoff, plot No. 284, having an area of 24.6 acres; Mr. N. Nikonoff, plot No. 724, 9 acres; Mr. A. Shanmoff, plot No. 570, 24.3 acres.

More Prahova Trial Wells.—Two trial wells are now about to be started in the Prahova district, to which particular interest is attached. They are intended to prove the petroliferous value of the land immediately to the south of the Baicoi-Moreni oil zone. One of these wells will be sunk at Ariceshti, west of Plæsti, and the second well to the south-west of the same town on the bank of the Prahova river and opposite Brazi station.

The Campina-Moreni Co.—An extraordinary general meeting of the Campina-Moreni Co. is to be held at Campina on the 30th of July to pass resolutions to transfer all the assets of the company to the Regatul Roman Co. The capital of the latter is to be increased from 500,000 to 24,000,000 francs. Of the capital, 10,000,000 francs will be provided by the new French bank, the Banque de l'Union Parisienne, and 14,000,000 francs by the German group interested in the Campina-Moreni Co.

New Roumanian Company.—A new company is being formed for the exploitation of oil fields in Roumania, under the title of the Alfa Co., with a capital of 1,000,000 francs. The founders are the banking firms of Marmarosch, Blank and Co., of Bucarest, and J. Allard, of Brussels. The new company will, among others, acquire and develop the concessions taken up by Mr. L. Hamilton, formerly manager of the Telega Oil Co., and who will be manager to the new company.

A Berekei Spouter.—Well No. 2, on the 29th group at Berekei, began to spout on the 12th of May from a depth of 1,318 ft. At first it yielded oil only, but later it began to throw out oil mixed with water. The spouter flows intermittently, the periods of flowing being from 1 to 20 minutes, whilst the intervals are from 1 to 12 minutes. The daily output is from 3,000 to 5,000 poods of crude oil, and about 50,000 poods of water. The temperature of the liquid issuing from the well is 52° C.

Acquisition of Petroliferous Lands.—The Russian Minister of Industry and Commerce has granted permission to the Aramazd Co. to acquire the following plots of petroliferous lands: (1) Leasehold plots Nos. 59, 63, 80 and 111 at Berekei; (2) the prospecting rights on the Government plot No. 22 at Kitchi-Iste-Su, near Kaia-Kent; (3) freehold plot of Mr. I. Melikoff of 8.1 acres, situated in the locality of Achmed Kutun, near the village of Berekei; and (5) the rights on plot No. 19 in Bebe-Aibat Bay.

ELECTRIC POWER AT THE ROUMANIAN OIL FIELDS.

Electric power is now used very largely at the Campina and Bustenari oil fields in Roumania for drilling and baling of wells and other work connected with the exploitation of the fields.

There are two generating stations both belonging to the Lahmeyer Co., one of which is situated at Sinaia, and the other, recently constructed, at Campina.

The first one affords a good example of the transmission of electric power by the alternating three-phase current, which is made use of in motors at the wells in Campina and Bustenari, and which are situated at a distance of 35 kilometres from Sinaia.

This station employs four turbines of the Francis type having a diameter of 1.60 metres and each developing 250 horse-power. The turbines are driven by a stream of water of a volume of three cubic metres per second, falling from average height of 20 metres. The flow sometimes goes up to six cubic metres per second.

There are four three-phase alternators connected directly with the turbines and making 160 revolutions per minute. The alternators produce three-phase currents of a tension of 3,000 volts. By careful construction the noise of working the alternators has been greatly reduced, which is a great advantage when all the alternators are worked simultaneously.

The three-phased current is at places transformed from 3,000 to 120 volts, and used for lighting at Sinaia, while elsewhere it is transformed from 3,000 to 11,000 volts, and transmitted to Campina by means of a triple line 35 kilometres long. The loss of power in transit amounts to about 5 per cent., so that the current reaches Campina at a tension of 10,500 volts. At Campina there is a transforming station where the currents are reduced to 500 volts, at which tension they are employed for working the motors at the wells, while at another station the current is reduced to 220 volts, and used for lighting purposes.

In view of the rapid increase in the number of wells at the oil fields and the growing use of electricity, a second generating station has been constructed by the Lahmeyer Co. at Campina. This new station embodies the latest improvement in electrical engineering, both in the construction of the installation as well as in the mode of distributing the current. Everything is done there automatically, the whole station being conducted by one man.

This station employs three compound tandem horizontal engines, each capable of developing 900 horse-power, and one compound vertical engine capable of developing 600 horse-power.

The switchboards for distributing the electricity and the automatic apparatus for regulating it are placed in a three-storeyed building adjoining the engine house. The distribution of the currents is done on the ground floor; on the first floor the electricity is distributed to the different lines; on the second floor safety apparatus is situated, and lightning conductors and two transformers, which reduce the current to 120 volts for

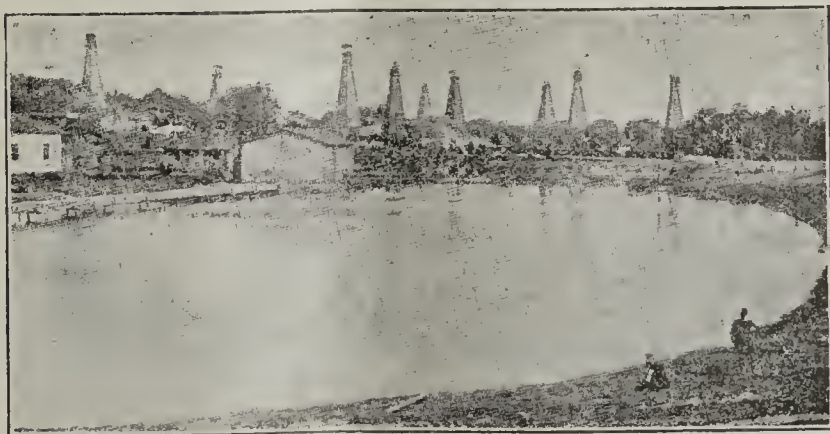
lighting the generating station. There is also a battery of accumulators in reserve. Everything in this installation is arranged so that the current shall not exceed the maximum tension for more than six seconds; after that the current is automatically interrupted.

NATURAL GAS IN OHIO.

After more than a decade of continued supply of natural gas in Ohio, the outlook for its future production, says a correspondent, for this territory is as bright as ever. Those cities supplied at first by the Fostoria field were subsequently supplied from Canada *via* Detroit, then from the West Virginia fields. The territory around Columbus was supplied by the Sugar Grove fields, which are still producing; this same territory, however, is not only supplied by these fields, but in very large quantities from the Licking county field, Ohio, the quantity being so great that it warrants the laying of a large main into Cincinnati. Every year sees a new Ohio town supplied with natural gas, and the output in that State is far greater now than a few years ago. Ohioans have been shrewd enough to take advantage not only of their own supply of natural gas, but also to import it from the neighbouring States, such as Indiana and West Virginia, the former now barren, but the latter is considered the greatest gas reservoir in America. From this underground gas laboratory billions of feet are being piped to Cleveland and other important cities, and it is now proposed to put in an 18-inch line under 400 lbs. pressure to supply Cleveland with this commodity from West Virginia, and also at this juncture we hear of the proposed consolidation of the manufactured gas plants at Cleveland. When one looks around and observes Columbus, Akron, Springfield, Zanesville, and other important Ohio cities, all using natural gas, practically to the exclusion of manufactured gas, it is discouraging to the owners of artificial plants in this vicinity, particularly as distance from the source of supply seems to affect but little the transmission of this product which supplies its own pressure.

THE BAICOI OIL FIELD.

Baicoi continues to be the chief centre of interest in the Roumanian oil fields. Lands there are changing hands rapidly, and new wells are being constantly put down. The celebrated well No. 6 of the Steaua Romana



continues to yield large quantities of oil. On Friday of last week this well had another violent eruption. Since its completion the well has yielded upwards of 20,000 tons of oil.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	11-13
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/9-3/3
Bibi-Eybat Petroleum Co. ..	£650,000, 5½% Pref.	£1	5/9-6/3
Californian Oilfields ..	£250,000 Ord.	£1	18-18
European Petroleum ..	£550,000 Pref.	£1	5½-5½
" " ..	£550,000 Ord.	£1	2/6-3/6
" " ..	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	84-87
Schibaieff Petroleum ..	£600,000 Ord.	£1	9/6-10/6
" " ..	£575,000 6% Pref.	£5	8/0-9/0
Shell Transport & Trading ..	£575,000 Ord.	£1	18-18
" " ..	£2,000,000	£1	23-34
Spies Petroleum Company ..	£1,000,000 Pref.	£10	27/6-28/6
" " ..	£312,500	10s.	9½-9½
" " ..			5/6-6/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on July 16th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	605	610
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	3,850	3,900
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	147	150
Neft Co.	250	—	—
Nobel Bros.	5,000	8,500	8,600
" "	250	—	—
Rops and Co., V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" " " (Second Issue) ..	250	—	—

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 19th July, 1906, as follows:—

There is no material change in the market which still continues very depressed. There has been a considerable falling off in shipments, as will be seen by the particulars which we give below.

Prices of tin plates are to-day as under:—

1c 18½ x 14	124 sheets	110 lbs.	12/9 to 13/0 per box.
1c 19½ x 14	120 "	110 "	12/9 to 13/0 "
1c 20 x 10	225 "	156 "	18/3 to 18/3 "

F.o.b. Wales. Tin lining and iron hooping extra.

SHIPMENTS OF TIN PLATES.

	Month ended 30th June.			Six Months ended 30th June.		
	1904. Tons.	1905. Tons.	1906. Tons.	1904. Tons.	1905. Tons.	1906. Tons.
Tinned Plates and Tinned Sheets.						
To						
Russia ..	2,571	80	128	14,268	6,023	563
Germany ..	1,598	2,140	2,612	9,948	14,449	14,991
Nether-						
lands ..	1,682	2,347	1,517	9,239	14,780	14,441
Belgium ..	—	796	736	—	3,928	6,649
France ..	1,315	1,211	2,207	7,911	6,820	12,349
Portugal ..	—	739	420	—	3,955	4,776
U.S.A. ..	7,268	5,297	4,192	34,871	33,786	24,774
B.E. Indies ..	3,912	4,523	2,931	21,790	27,167	25,955
Australia ..	1,084	1,137	1,950	7,777	6,706	8,795
Canada ..	1,328	2,147	1,373	7,073	9,676	6,544
Other						
Countries	9,745	8,450	6,480	59,257	58,819	57,451
Total tons	30,503	28,867	24,546	172,134	186,109	177,288

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8½ pd	£199,750	£10	17½
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Burmah Oil, Ord.	£1,100,000	£1	54s. 3d.
Do. Pref.	£250,000	£1	24s. 9d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8½
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	17½
Do. New (£8 10s. pd.)	£131,750	£10	17½
Pumpherton Min. Oil Co., Ltd., Ord.	£110,500	17s.	96s. 9d.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	12½
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	30s.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	63s. 6d.
Do. "B" Deb. ..	£150,000	£100	154½

DUTCH COMPANIES.

Company.	Latest Quotations	Quotations Last Issue	Florins.
Arnhemsche Petroleum Mij. ..	—	80	1,000
Aurora " " (Deb. 5%) ..	—	90½	—
Campina Poiana Mij.	39	35	—
Dordtsche Petroleum Mij. (Pref.) ..	119½	122	500
" " (Deb. 4½%) ..	102½	102½	1,000
Elzasser Petroleum Mij.	2	2½	1,000
Gaboes " "	—	19½	—
Holl. Rumeensche Petroleum Mij. ..	34	26-28½	1,000
Int. Rum. Pet. Mij.	87	88½	500
Java Petroleum Mij. (Ord.) ..	—	30	1,000
" " (Pref.)	38	42½	—
Koninklyke Nederl. Pet. Mij. Shares	570	480-487	250-1,000
" " Share certificates	570	478-482	1,000
Mœara Enim Petroleum Mij. ..	112½	114½-115	100
" " 1-1,000 Oblig. 5	102	102	250-1,000
" Moesi Ilir " Petroleum Mij. ..	44½	34½	—
Nederl.-Rumeensche Petroleum Mij.	17½	17½	—
Nieuwe Ned. Petroleum Mij. And. ..	—	55½	1,000
Oliebronnen in Hannover Mij. ..	137	170	—
" " (Deb. 5%)	99½	100½	—
Panolan Maatschappij Cert. ..	355	340	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	135½	143½	1,000
" " (Common)	115½	97 x.d.	—
Sumatra-Palembang Petroleum Mij	71½	61	500
Zuid Perlak Petrol. Mij. (Pref.) ..	88½	84½	—

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended July 7th was 233,000 poods, or 3,756 tons; and for the week ended July 14th was 92,000 poods or 1,483 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended July 8th was 220,000 poods, or 3,547 tons; and for the week ended July 15th was 170,000 poods or 2,741 tons.

SPIES PETROLEUM Co., LTD.—Owing to the strike which still exists on their properties at Grosny, there was no production for the week ended July 8th, or the week ended the 15th.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended July 8th, 1906, was 69,994 poods, or 1,128 tons (production for four days only; work stopped by strike 6th July).

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THE

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**THE AMERICAN PRESIDENT AND THE
STANDARD OIL CO.**

THE action of President Roosevelt in regard to the question of corporations is receiving considerable adverse comment on the other side of the Atlantic, while here in England public opinion by no means endorses his views. The President has spoken somewhat vehemently, and with obvious disregard of discrimination, against the oppression and mischievous effects of those combinations of industry and capital popularly known as Trusts. It is eminently worthy of note, especially in view of the lurid pictures that have been drawn in this country concerning American discontent and unhappiness under the tyranny of Trusts, to find that the mind of American people is very tranquil upon the matter. That some measures of reform and regulation are perhaps desirable, one will not for a moment argue; there is, however, no general call for drastic legislation, involving an organic change of policy, and the President's attitude is, therefore, not in the least justifiable. There may be—or there may not be—truth in the statement that no hostility against commercial corporations is intended, but from those who have closely followed the trend of events of late it is evident that

there is beneath the surface some desire to produce an effect which will decidedly be to the disadvantage of business corporations.

We all know that it is the easiest thing in the world to denounce corporations and the excessive power which capital confers upon unscrupulous and selfishly-ambitious men; but it must not be forgotten that combination is the natural development of existing social and commercial systems, that some wealth is wisely used and distributed, and that, in this case at least, it is impossible by drastic legislation to strike at either real or imaginary evils without causing, as an immediate result, a vast amount of disturbance, probably more dangerous and of more lasting ill effect to the entire community than even the original abuse, presuming that it did exist.

So far as the petroleum industry of the United States is concerned, we personally feel that no dose of new legislation is required. Among those who are intimately acquainted with the petroleum industry of the States, it is a matter of common knowledge that a real good has been done to the development by the presence and active co-operation of what is termed the Trust element, and it occurs to us that the accusations as to railway preferential rates, etc., which have been levied by President Roosevelt at certain individuals are not only built upon the most flimsy fabric, but are paltry in the extreme.

It is interesting here to remember that the Standard Oil Company, to which reference has frequently been made in our leader columns, was originally a combination of corporations, that is to say, a Trust. Mr. Rockefeller however, was clear-sighted enough to recognise, after a comparatively short experience of its working, that such an organisation must necessarily include many elements of weakness, individual rivalries, clashings of interest, and the like. In such an undertaking as he had in view, there was room for one master-mind only, and the result was a reorganisation of the enterprise on the lines and with the policy and consequences now familiar to the world, and who shall say that this has not been for the general good of the petroleum industry as a whole? It is easy to understand that in the fields situated close to the coast line—for instance, the Texas territories—it has been possible to carry on energetic development without any very large outlay of capital, and consequently numberless small companies have found it feasible to operate most successfully in the fields. But where a heavy expenditure has been necessitated in order to thoroughly develop territories inconveniently situated for the transport of oil to the consuming centres or the shipping ports, there it is that the Standard Oil Co. has gone—as in Kansas and Indian Territory—and at risks which no other organisation could withstand—has made it possible for the operator to profitably carry on his business as a producer. One only needs to recall the great progress which has been made during the past few years either in these territories or in the more western ones of the mid-Californian field to be convinced that though Trusts frequently spell ruin to the industries, America has, on the

other hand, to thank the Standard Oil Co. for much of its present day commercial progress, and in which they spring up and operate.

At the present time we are aware the Anti-Trust movement is gaining power throughout America, and though some good may result from a remoulding of some of those mammoth consolidations of interests, we fail to see the justification for the deeply biased attitude which prevails at Washington against the Standard Co. as the pioneer of the American petroleum industry. That it will bring a certain amount of disaster in its train is evident, even at the present time, and the unreasonable law to make all pipe lines common carriers is only one of the many things which will most assuredly set back the clock of progress. The classification of the various oils will be totally lost, for high and low grade qualities will be run through pipe lines together. We have not the space at this moment to dwell at length upon this absurd piece of legislation, but to our mind it is clear that legislative interference is somewhat overstepping the bounds of reason when it boldly (and blindly) aims at the making of laws which shall hamper the proper working of an organisation that by its past career has proved itself so beneficial not only to America but to the world at large. Whatever room there is for the regulation of the American Trusts, it cannot be too clearly laid down, that this is not in any way applicable to a concern built up upon the lines laid down by a master mind, which does not operate for the purpose of disadvantageous monopoly, but in order that a stimulus may be given to an important industry which has from time to time shewn its need for guidance and development.

LONDON OIL SHARE MARKET.

FRIDAY, JULY 20TH.

The London Stock Exchange continues to be most disappointing, and a considerable list of declines has been registered since we last wrote. The continual sagging away of Consols and other gilt-edged securities, taken in conjunction with the rumours prevalent as to the solvency of one or two very important firms is creating a feeling of uneasiness which permeates all sections of the market.

Although there are few changes to record amongst the Oil Group, the section has not been exempt from the downward tendency, for where alterations are registered, every instance they shew depreciation in value.

At the mid-July carry over, which took place on Tuesday, 10th inst., the whole account was of the smallest possible dimensions, and rates of interest were very easy in all departments.

A comparison of the making-up prices with those fixed at the end-June settlement shewed a good deal of depreciation in the fortnight. Anglo-Russians at 1s. 6d. lost 6d. a share, Baku Preference at 6s. 9d., 9d.; Californian Oilfields at $5\frac{1}{2}$, $\frac{3}{16}$; Russian Preference at 11s., 3d.; Schibaieff Ordinary at 8s. 6d. ditto; Preference, at $3\frac{1}{8}$, $\frac{1}{2}$; Shell Transport at 28s., 1s. $4\frac{1}{2}$ d; and Spies at 6s. 6d., 2s. The only gain was an improvement in Baku Ordinary of 3d., at 4s., while Russian Ordinary at $\frac{1}{2}$ were unchanged.

STRIKE AT THE BAKU OIL FIELDS.

OPERATIONS SUSPENDED.

WORKMEN TERRORISED.

The latest news from Baku is of a very serious character. Strikes among the workmen have become general, and work at the oil fields has in the majority of cases been suspended. Thus the Russian petroleum industry, which has been for the past few months working its way back to normal conditions, has again received a severe set-back.

The strikes among the workmen at the oil fields have been caused as a result of their having put forward certain demands which have been categorically refused by the various operating firms. As a matter of fact, the firms are inclined to the belief that these demands have simply been put forward as an excuse for the men to go on strike, for the feeling of terrorism throughout the Caucasus is now running high. The main demands of the workers can be summed up as under:—

- (1) The eight hours day to be extended to men paid by the hour.
- (2) The yearly bonus to be paid at the rate of 30 per cent. on the annual earnings.
- (3) Increase of pay of 30 per cent. to those receiving up to two roubles per day, and 20 per cent. to those receiving more than two roubles per day.
- (4) Annual leave of one month without loss of wages.
- (5) Payment during the time of strike.

In order to protect the oil wells against damage, these have all been plugged. The strike is now raging on the properties of Messrs. Nobel, the Caspian Society, the Caspian and Black Sea Society, the Mantascheff Co., the Russian Petroleum and Liquid Fuel Co., the Schibaieff Co., the Baku Russian Petroleum Co., the Bibi-Eybat Petroleum Co., Mirzoeff Bros., Musa Nagieff, and the Naftalan Co.

Mr. Grigorianz, the manager of the Mantascheff property at Bebe-Aibat, has been dangerously wounded at Bebe-Aibat. The outrage was committed by some of the men on strike.

From enquiries made at the offices of the various companies in London it would appear that the outlook is very serious indeed. Though there is little or no rioting among the men, the ferment is increasing, and developments are expected at any moment. Trouble also prevails at the refineries, and here also many of the workers are on strike. Thus the whole industry is approaching a complete standstill.

THE CASE OIL TRADE AT BATOUM.

From the time of the closing of the case factories, some of the engineering works and other labour employing establishments as Batoum, several thousand workmen were left without employment. Part of these men went back to their homes in the interior, but finding no work there the majority returned to Batoum in the hope of getting some daily work. The position of the workmen became particularly critical after the non-realisation of their hopes for the reopening of the case factories at the

end of last year. At last, at the beginning of March, the Siderides works were the first to open and took on 300 men, guaranteeing them a minimum of three days work each week. The affairs of this firm were fairly successful, and in order to satisfy the demand for case oil for Turkey and the Balkan countries, they had to work full time to their own advantage and to the advantage of their workmen.

In June, as has already been stated in the Review, the Mantascheff Co. re-opened their case factory, and engaged 500 workmen, who have agreed among themselves to work in two shifts of 250 men each, each working 13 days without interruption. Formerly these works employed 1,500 to 2,000 men, and produced 20,000 to 25,000 cases, but now the output has been reduced to 5,000 cases.

The Mantascheff Co. has developed a large output at the case oil works in Alexandria, which enabled it to retain the North African markets during the time the Batoum works were closed. At Alexandria the company only manufactures tins, without wooden cases. Should the company succeed in regaining some of the Far Eastern markets, it intends to increase its Batoum output, increasing also the number of men employed. This will depend to a large extent on the men themselves, as the ability of the firm to compete successfully on the world's markets depends on the rate of output at its works, and the quality of the work in making the tins and cases. Formerly in both these respects the Batoum case oil exporters were at a disadvantage against their foreign competitors. The re-opening of the Rothschild case oil works is dependent on the same considerations. The two firms who have already re-started their works have introduced a nine hours working day.

SEQUEL TO A CONTRACT WITH THE BOLIVAR SYNDICATE.

An interesting sequel to a contract made in connection with the exploitation of oil lands in Columbia was recently heard at Sarnia, the action being that of Josh *versus* Sutherland. The plaintiff was John Josh, a driller, and the defendant was Mr. Sutherland, the well known oil expert of London. It appeared that Mr. Sutherland engaged plaintiff, John Josh, on behalf of the Bolivar Syndicate, a London Company, to go to Columbia, South America, to drill for oil, in April, 1904, on the terms of a written hiring. Josh went, but a Mr. Farquhar, who was the representative of the company in charge, neglected to pay the drillers wages and they got in a bad plight, finally receiving \$250, with which they returned to Petrolia in March, 1905. In July of that year Mr. Sutherland was in Petrolia for two or three days en route from Australia to England, and discussed with Josh about helping him to get his wages from the company. Before he left town, however, it was decided to try and hold Mr. Sutherland liable personally.

In giving a judgment for the defendant Mr. Justice Teetzel said that the evidence clearly freed Mr. Sunderland from all suspicion of misrepresentation in his dealings with Josh. The Judge specially commented on the complete failure of the case to establish any plea set up by the plaintiff. He also referred in the strongest terms of censure to the conduct of the Bolivar Syndicate directors in taking these men out to South America and treating them so badly. The chief directors are Mr. John Hanbury, a brewer, and Mr. E. M. Trouzeau, a mining engineer, of London.

PETROLEUM IMPORTS INTO MANCHURIA.

The annual report of the United States Consul-General at Newchwang contains the following reference to the petroleum import trade of Manchuria :—

In kerosene the American product has had almost a monopoly in this market. At one time Russian oil threatened serious interference during Russian occupation of Newchwang, and at the present time the Germans, who are handling the Sumatra oil, claim to have brought to this market during the past season 439,030 gallons, valued at \$41,325. The Standard Oil Co. imports during 1905 were approximately, 2,482,700 gallons, the custom house valuation being \$326,874, which is very low, as will be seen by computing the relative value per gallon on the basis of the total estimated valuation. Of this amount 1,130,710 gallons came in direct from the Atiantic seaboard. The balance was transhipped either by the Chinese or the Standard Oil Co. *via* Shanghai. The Sumatra oil promoters are eager to establish a permanent business in Manchuria, and contemplate the construction of storage tanks, etc. The Standard Oil Co. is anxious to provide adequate accommodations for its extensive and growing business, and is ready, just as soon as a suitable site can be secured, to build extensive storage facilities. Work on these new buildings will be begun this season.

During February, 1906, there developed a tendency on the part of the Sumatra oil promoters to cut prices. This may be found necessary to secure ready sales, inasmuch as the Sumatra product has a reputation among the natives for smoking, and not being as desirable as the Standard Oil product. The oil imports for 1905 should be considered, however, in connection with the fact that between 2,800,000 and 3,000,000 gallons were carried over by the Standard Oil Co. from 1904 to 1905. Again, 1,800,000 gallons were carried by the same company from 1905 to 1905. This is alleged to be mainly due to interferences to inland transportation facilities resulting from the Russo-Japanese war.

AN IMPORTANT ENGINEERING CONFERENCE.

During next week a joint meeting of the members of the American Institute of Mining Engineers and of the Iron and Steel Institute will take place in London. A number of valuable and interesting papers are to be submitted, while a lengthy round of pleasure excursions has been arranged for the American friends. The guests will be welcomed on Tuesday by the president of the Iron and Steel Institute, the members being addressed by Sir James Kitson, Bart., M.P. The joint meeting will be held on Thursday, when a selection of papers will be read and discussed. In the afternoon a visit will be paid to Messrs. Frazer and Chalmer's works at Erith.

PRODUCTION OF THE NEDERLANDSCHE INDUSTRIE EN HANDEL MAATSCHAPPIJ.

STATISTICS FOR THE FIRST HALF OF 1906.

The statistical cables received by the London office of the Nederlandsche Indische Industrie en Handel Maatschappij from the fields of Borneo for the second quarter of this year shew the details as under, as compared with the corresponding period of 1905 :—

		March—June.	
		1906.	1905.
		Tons.	Tons.
Production of Crude Oil .. ..	..	92,380	96,020
Crude Oil sold .. ..	..	—	13,679
Intake of Refineries, etc. .. ..	..	76,757	86,022
Output of Refineries—			
Kerosene .. ..	..	23,332	34,969
Other Products .. ..	..	42,711	43,818
Shipments—			
Kerosene .. ..	..	38,502	35,494
Other Products .. ..	..	34,140	33,205

With the announcement of the figures for the second quarter of the year, it is possible to compile a statement shewing the production and treatment of oil upon the company's properties for the first six months of this year. This is as under :—

		The Half-Year.	
		1906.	1905.
		Tons.	Tons.
Production of Crude Oil .. ..	..	207,620	191,090
Crude Oil sold .. ..	..	—	81,039
Intake of Refineries, etc. .. ..	..	156,305	150,622
Output of Refineries—			
Kerosene .. ..	..	51,431	60,138
Other Products .. ..	..	85,443	75,250
Shipments—			
Kerosene .. ..	..	61,835	60,420
Other Products .. ..	..	68,783	67,263
		At End of	End of June,
		Last Month.	1905.
		Tons.	Tons.
Crude Oil in stock above ground		78,102	25,443
Stocks awaiting shipment—			
Kerosene .. ..	..	20,717	9,001
Other Products .. ..	..	19,634	18,629
Total Stocks of Crude and Products		118,453	53,073

During the past three months (April, May and June) the congestion of storage compelled the destruction of 10,880 tons crude oil, 3,050 tons benzine, and 4,840 tons residuum, making the total quantities destroyed during the first half of the present year as follows :—19,580 tons crude oil, 8,560 tons benzine, and 11,640 tons residuum ; total, 39,780 tons.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JULY 16th, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since July 2.	From Jan. 1.	Since July 2.	From Jan. 1.	Since July 2.	From Jan. 1.	Since July 2.	From Jan. 1.	Since July 2.	From Jan. 1.	Since July 2.	From Jan. 1.	Since July 2.	From Jan. 1.	Since July 2.	From Jan. 1.
Austria ...	2,080	876,640	4,000	358,770	8,000	71,930	—	—	—	—	—	—	—	—	14,080	1,318,340
Belgium ...	130	370	11,780	257,820	—	11,000	—	—	—	5,300	—	—	—	2,496	11,910	265,976
Borneo ...	—	210	—	—	—	—	—	—	1,225,300	4,488,050	—	240	—	—	1,225,300	4,488,500
Canada ...	—	—	—	8,000	—	32,400	—	—	—	—	—	—	—	—	—	40,400
Germany ...	66,280	2,923,350	69,660	836,860	—	—	—	—	—	2,380	—	—	—	—	6,290	135,940
Holland ...	—	9,740	—	1,160	—	—	—	—	12,000	1,104,910	—	271,000	—	—	40,880	12,000
Roumania ...	—	2,563,175	—	—	—	—	200	1,035,880	—	591,980	—	—	—	—	200	4,191,035
Russia ...	1,620,000	19,268,200	23,980	2,526,740	—	—	—	1,604,250	5,050	5,050	—	—	—	—	5,660	1,649,030
Sumatra, &c	—	—	—	—	—	—	—	—	—	976,500	—	—	—	—	—	976,500
U.S.A. ...	9,006,840	55,154,057	1,213,080	24,358,384	—	533,553	1,050,990	25,495,540	—	5,591,140	—	9,047,730	595,290	1,057,240	11,866,200	121,217,554
Other Countries	—	1,370	400	22,750	—	—	—	—	—	480	—	—	2,600	213,400	3,000	238,000
	10,695,330	80,797,112	1,322,900	28,370,484	8,000	648,883	1,051,190	28,135,670	1,242,350	12,765,790	—	9,318,970	597,890	1,325,956	14,917,660	161,362,775

MISCELLANEA.

THE NEW LIGHTHOUSE ILLUMINANT.

A VICTORY FOR OIL.

The Trinity House authorities have now completed the equipment of all the lighthouses under their charge with the Kitson system of petroleum incandescent lighting, and it is claimed that the new illuminant gives three times the amount of illumination that was formerly given by the high candle-power wick lamp, and with a very great reduction in the consumption of oil. The intensity of the new Kitson lamps may be judged from the fact that with the prismatic reflectors the light emitted measures from 200,000 candle-power up to 500,000 candle-power. Several of the foreign lighthouses have also been equipped with the same system.

The credit for this revolution that has been created in lighthouse illumination is due to Mr. Arthur Kitson, the inventor of the Kitson system, and Mr. Thomas Matthews, the chief engineer of Trinity House, who assisted in adapting the Kitson system to the present lighthouse mechanism.

THE FORTHCOMING OIL LAND SALES AT BAKU.

It has now been officially announced that the fifth series of sales of Government petroliferous lands in the Baku oil fields will be held at Baku on the 1st of November (o.s.) Altogether 30 plots are to be disposed of, of which 1 is at Balakhany, 10 at Bebe-Aibat, 11 at Saboontchi, and 8 at Ramany.

The conditions of these sales include an obligatory minimum production of crude oil on each plot, a fixed term of two years within which the production of crude oil must commence. The wells are to be drilled to a minimum depth of 1,400 feet, and a minimum number of wells is to be drilled on each plot, while the amount of money to be deposited for each plot is also fixed. The consideration for the leases in each case is to be a percentage of the production. The greatest interest centres on the five plots on the drained portion of Ramany lake, which has not yet been touched by the drill.

OIL PRODUCTION IN COLORADO IN 1905.

According to a British Consular report, the production of crude oil in Colorado for the year 1905 was 650,000 barrels. This is somewhat in excess of the previous estimate, and is probably very close to the actual amount. No new wells of great productive capacity were discovered during the year, but a number of averaged sized ones were developed. In the Boulder district a more favourable outlook is reported, but the Florence section continues the main source of supply for the State. The test wells drilled in the vicinity of Colorado Springs were all failures. The Florence oil field has supplied a considerable portion of the Rocky Mountain regions with petroleum for a number of years.

ROUMANIAN PETROLEUM EXPORTS IN MAY.

The exports of petroleum products from Roumania in May were as follows, the figures for the corresponding month of last year being given for the purposes of comparison (in tons):—

Destination.	Crude oil, distillate, gas oil, etc.	Illum. oil.	Benzine.	Total.
England	—	12,300	1,903	14,203
France	438	7,384	5,692	13,514
Germany	1,238	1,372	1,551	4,161
Tunis	—	3,776	3	3,779
Belgium	—	3,482	—	3,482
Norway	3,205	230	—	3,435
Turkey	84	1,270	2	1,356
Austria-Hungary ..	1,283	—	—	1,283
Other Countries ..	70	6	7	83
Total in May, 1906 ..	6,318	29,820	9,158	45,296
" " 1905 ..	3,564	9,662	5,310	18,536

PARAFFIN WAX EXPORTS FROM AMERICA DURING MAY.

The exports of paraffin wax from America during May were as under (in pounds), a comparison being given with the figures for the corresponding period of 1905:—

Exported to	1905.	1906.
United Kingdom	5,375,828	7,395,998
Belgium	66,699	52,137
France	52,275	66,308
Germany	1,499,695	660,334
Italy	798,382	1,117,820
Netherlands	600,633	654,489
Other European Countries ..	90,630	358,928
British North America	817	4,505
Central America and British Honduras ..	31,900	73,672
Mexico	353,926	741,815
West Indies and Bermuda	1,000	—
Brazil	7,041	15,990
Chili	—	—
Other South American Countries ..	11,000	12,000
Japan	697,755	2,099,292
British Australasia	45,750	527,849
Other Asia and Oceanica	733,221	—
British Africa	436,150	127,739
Other African Countries	—	—
Totals	10,813,702	13,908,876

THE UNION OIL COMPANY AND THE JAPAN MARKETS.

With the assurance that the Union Oil Co. will be pumping oil across its pipe line at the Isthmus of Panama next month, and the further notification that about 20,000,000 barrels of Californian oil are about to be contracted for, for delivery in Japan, a strong feeling of confidence prevails throughout the Californian oil fields, where the necessity for additional markets is still being felt. It is the general belief in California, says the *Pacific Oil Reporter* in its current issue, that the Union Oil Co. will capture the Japan contract. At the present time the Union Oil Co. is buying large quantities of oil from numerous concerns, notwithstanding its own tremendous production.

AMERICAN NOTES

Texas Shipments.—The port shipments of Texas crude oil during June amounted to 609,915 barrels according to the current issue of the *Oil Investors' Journal*. These figures shew an increase above those of the preceding month of 61,656 barrels.

More Liquid Fuel Tests.—It is stated upon good authority that the American Government is preparing for exhaustive tests of crude petroleum as a fuel for warships. A plant is now being installed at Mare Island navy yard with this end in view. The cruiser "Wyoming" is to be used for the tests.

Pipe Line Co. Sold.—Some time ago one or two of our subscribers wrote us asking for information concerning the National Oil and Pipe Line Co. They will now be interested to hear that the property of the company has been sold under foreclosure by the bondholders for \$55,000 to a Houston capitalist.

From Leamington.—The latest information from the Leamington fields, which is contained in the current issue of the *Petroleum Advertiser*, shews that there is considerable activity being put forward in the development of the field. A number of new wells are going down, and the results achieved are fairly gratifying.

Growing Production.—It is reported that in the Glenn pool in Green county, 18 producing wells are making 5,500 barrels, with three dry holes and a 5,000,000-foot gasser. Three of these wells had an initial production of 900 barrels each, with a pressure of 700 pounds, which causes them to hold up remarkably well, and there is 70,000 barrels of tankage full and the wells are shut in part of the time.

A Petersville Strike.—The Petersville oil field, which has been throwing out surprises for the past several years, sprung a new one a few weeks ago when the South Penn Oil Co. struck a flowing well on the lot of Andrew Fehl in the borough of Petersville. This well was drilled into the gas sand and an immense volume of gas was found. The reports are that the roaring of the gas could be heard a full mile from the location of the well.

New Wild-cat Wells.—At the present time there is much wild-cattling taking place in Texas, and though the new prospective fields developed nothing of importance during the past month, the work is very closely watched. Eight miles north of Beaumont a test well is being sunk, while south-east of Alvin, the Brasoria Oil Co. is preparing to start. Work still continues upon the old holes at Davis Hill, and at Cypress, where developments were suspended some time ago, a new start has been made.

Oil Field Runs.—For the first 21 days in June the runs of the Mid-Continent oil fields averaged 54,341 and the shipments 21,838 barrels a day. This left 32,502 barrels to be cared for in iron tankage and stored for future consumption. These figures shew a considerable decrease from May and reveal a declining activity. The rapid increase in the surplus stocks and adverse decisions on the part of the Interior Department have exercised a depressing influence upon developments in the Creek and Cherokee reservations of the Indian Territory.

Trunk Pipe Line Held Up.—The second trunk line to Whiting, Ind., has been held up by the commissioners of four townships in Eastern Illinois refusing to grant permits to cross highways, and at the same point where the first line was held up. It is expected that the matter will be shortly adjusted. A force of 3,000 men is on the line and 100 miles remain to be laid. Of the 600 miles between Humboldt, Kas., and Whiting, Ind., 300 miles of the second line is 12-inch pipe, with loops, stations, pumps and relay tanks completed to handle 50,000 barrels of oil every 24 hours.

Osage Well Statistics.—The report of the Indian Territory Illuminating Oil Co., which holds a blanket lease over the lands of the Osage Indians in Oklahoma, has just been published. It shews that up to June 10th, 1906, a total of 862 wells had been drilled. Of the entire number, 569 were oil wells and 55 gas wells, while the remaining 238 were dry holes. The record for twelve months was 318 wells, or an average of 26½ for each month. For the period ending June 30th, 1905, the total number of wells drilled was 544, which included 355 oil wells, 34 gas wells and 155 clusers. The figures on June 10th, 1906, constitute a complete record of all developments from the time of the first work under the Foster lease to the present.

JUNE DEVELOPMENTS IN THE AMERICAN FIELDS.

An all-round gain is the result of the June developments in the American fields, and taken altogether conditions seem to be fairly bright for the operators. A large number of new wells were completed in old territory which were of small calibre, but in the aggregate helped to swell the new production. The old Venango-Clarion district completed more wells than either West Virginia or South-eastern Ohio, and more than all the new wells combined in the Allegany, Bradford and Middle Fields. It also completed just twice as many wells as were drilled during June in Butler and Armstrong and the various sections of South-west Pennsylvania. May completed over 200 more wells than April, but the gain in new production was comparatively small.

In the Trenton Rock fields there was likewise a gain in wells completed and new production, accompanied by a decline in field operations. The Sucker State has a large area of prospective territory in sight, which will attract the attention of oil operators for many months to come. Kentucky completed fewer wells than in May, but there was a large gain in the new production and in new work under way.

South-west Pennsylvania supplied the largest wells in this State during June. In the Burgettstown district 17 wells were completed, which averaged 38 barrels each. The entire division completed 50 wells, of which 12 were unproductive, while the new production aggregated 931 barrels. In May the same division completed 33 wells, including seven dry holes and five gassers, and the new production was 488 barrels.

West Virginia continues to lead the other Eastern States in the volume of new production, and in its numerous sub-divisions are found the wells of largest calibre that yield oil of the better grades. The Point Pleasants district in Tyler county is the centre of greatest interest in the Mountain State, and the new wells coming in have kept up the yield of the pool in a remarkable manner. The 16 productive wells credited to Wetzel and Tyler counties in June had an average yield of nearly 54 barrels.

For June the total new production of the Pennsylvania oil regions was estimated at 5,279 barrels. Of this amount, 2,101 barrels, or nearly 40 per cent., was credited to the oil-producing districts of West Virginia. South-eastern Ohio produced 1,022 barrels of the total, or less than 20 per cent. The remaining 2,156 barrels, or 40 per cent., was supplied by the oil producing sections of Pennsylvania and New York.

In the Allegany or New York State oil districts 57 productive wells were completed during the month, with an average yield of 2¼ barrels to the well. In Pennsylvania 326 wells were completed which averaged 6¼ barrels to the well. West Virginia had 71 productive wells which averaged 30 barrels, and South-eastern Ohio 105, which averaged 9¾ barrels. South-eastern Ohio completed 71 more wells than West Virginia in June, but its new production was 1,079 barrels, or over 50 per cent. less.

The new wells completed throughout all the sections producing Pennsylvania oil averaged 9¼ barrels each in June as compared with 8¼ barrels in May and 11½ barrels in April. The average for June a year ago was a little over ten barrels.

OUR AMERICAN LETTER . .

From Our . .
Special . . .
Correspondent.

PITTSBURG, PA., July 1st, 1906.

A marked sameness has attended the developments in the lower South-west and South-eastern Ohio fields since my last report to the REVIEW a fortnight ago. For some weeks the discoveries in all fields have been common-place, and there is nothing in sight to warrant the opinion that anything better can be expected in the near future. The increase in development is of a character that is not of general interest to the trade. The discovery of some strictly new territory capable of supplying high-grade crude would revive interest, but the simple increase of wells drilling in older territory cannot furnish an appreciable amount of new production. The scarcity of producing territory in the Eastern fields has caused many operators to try conclusions in the Illinois and other Western fields.

All engaged in operating in the Illinois and other Western fields have not entirely deserted or severed their connections with the East, but they are devoting more time to developing their holdings in the West than in the old fields in the lower South-west. If the opinion of the more sanguine is to be accepted work of developing the Illinois field is only beginning. If this is true and the same degree of success attends operations as has been noted in the primary stage, then the supply of the cheaper grades of crude will be largely increased, and with the Mid-Continent fields undefined and more oil than can be taken care off, the outlook for better prices for the inferior grade can scarcely be expected.

Two hundred and fifty-three wells were completed in these fields during May, and it seems probable that this record has been broken during the month just closed. Over 8,000 barrels of new production was added in May. Unless shipping facilities are quickly enlarged a situation not unlike that existing in the mid-continent region will probably be brought about. Operators are flocking in from all directions to get on to what they call the "good thing."

Early development shewed the initial output of wells to range from 50 to 150 barrels. Late developments brought wells good for 800 barrels. Wells ranging from 150 barrels to 500 barrels are not uncommon.

One-thousand-barrel gushers are now looked for. Operators are enthusiastic as to the outlook, and predict that wide territory is yet to be developed.

The outlook for the discovery of any large pools in the lower South-west oil fields is not promising, but the prospects for a couple of extensions are very good. With the exception of the Keener sand pool in Tyler county, efforts for new producing territory for more than a year have revealed nothing better than extensions to some old developments.

South-west of Rowells run, in Calhoun county, the well just drilled in on the M. H. Hall farm makes the prospects for an extension of not less than a mile to the south-west of present developments look very bright. It is not likely that such large producers will be found in this section as were discovered in the Yellow Creek



fields, in Calhoun county. The Rowells run district furnished a large number of wells, but they were light. In advance of and to the south-west of the Rowells run field in the edge of Calhoun and Roane counties there will be several wells due this week which will have an important bearing on the probable broadening out of the extension. Several miles in advance of the latest producer, dry holes were completed some years ago, but that was at a time when it was thought that a duster condemned a large scope of territory.

Operators in the Keener sand pool on Point Pleasant creek, in Tyler county, hope to extend the producing area of that pool to the south-west. The good producer completed on the Christen farm is slightly in advance and the reported drilling in of a good producer by the Fisher Oil Co. promises to advance the producing lines a greater distance than any other well since the development of the pool began. The interior work under way and starting combined with that in advance of developments makes this the most active of any in the lower southwest. Shooting the old wells is something of a feature in the pool, and the result in almost every instance is gratifying. During the present week enough high explosive fluid was used to increase the production of old wells sufficiently to prevent a decline in the aggregate daily output of the pool.

The well drilled in on the Snodgrass farm, located near Glovers Gap in Marion county, which has already been referred to, was the incentive for starting some new work about a month ago. The new ventures in that locality are nearing the sand, and in a week or 10 days more should be known of the possibilities in that quarter. There are not more than half-a-dozen wells drilling and starting, but each is a test of some importance.

Notwithstanding the general cry of depression in the the Territories oil field, the failure of the pipe lines to carry anything like the production and the uncertainties in the lease situation in Indian Territory, there were almost as many wells completed in June as in May—the banner month in the history of the south-western field. The new production also shews a steadiness, varying little in the general average of previous months. Of the 395 wells completed, forty-nine were dusters and thirty-one gas wells, leaving 215 producers. The new production shewn is 17,455 barrels, an average of fifty-five barrels to the well, which certainly indicates that this is one of the greatest oil fields ever discovered.

Probably more interest at present is attached to operations in the Glenn pool. Apparently the trend is almost due north and south and has not shewn any remarkable width, at no place seeming to be more than two miles from one edge to the other. Out of twenty wells completed in that pool last month eight were dusters. There is much wildcatting in an effort to extend the pool and some big wells are being brought in along with the dry ones. In the Bartlesville district there has been more work done during the past few weeks than at any previous time in the field's history.

THE RECOVERY OF VOLATILE LIQUIDS.

AN IMPROVED PROCESS.

A patent has recently been granted to Edmund Delhotel, of 40, Rue Caulaincourt, Paris, France, engineer, for an invention relating to a process for recovering simply and economically by evaporation and condensation volatile solvents used in diverse industries, particularly the benzine used for cleaning fabrics.

It has already been suggested to circulate air over materials or fabrics which have been treated with volatile solvents, for the purpose of removing the vapours of the solvents, and afterwards through refrigerators to condense the vapours and to recover them in the liquid state. By the present invention, apparatus of simple but effective construction is used for the condensation in combination with a heat exchanger wherein the heat of the air passing away from the heating chamber is in large part transferred to the air which is entering the said chamber.

In the accompanying drawings, Fig. 1 is an elevation partly in section of the whole apparatus, and Fig. 2 is a plan shewing the heat exchanger in section.

For the sake of example, it may be supposed that the apparatus is for the recovery of benzine which has been used for cleaning fabrics, clothing, or the like.

The apparatus constructed according to this invention comprises a heating chamber A, a heat exchanger B, a condenser C, which may operate by radiation or by conduction, and is preferably fractional in its action, and a fan D for circulating air through the whole apparatus.

The same air is continuously circulated, but as its pressure is at or about that of the atmosphere, it is possible to open the heating chamber for introduction of material even while working. The heating chamber A may vary according to the nature of the material under treatment, and may be heated directly or by steam. The heated air passing by pipe *a* from this chamber charged with vapour of the solvent, enters the heat exchanger B, which is a closed chamber wherein is a number of horizontal tubes *b*, around which the charged air passes on its way to the surface condenser C. In the condenser the air is subjected to a progressive refrigeration, and the vapour it carries is converted into a mist the drops forming which in part deposit in the surface condenser, and in part in a large condensing chamber through which the air passes on its way to the fan.

The surface condenser consists of three parts, namely, one *c* through which water passes, another *d* through which iced water passes, and a third *e* through which iced water is circulated; the air passes over these parts in the order in which they have been named.

The preferred form of condenser is three series of winged pipes through which water circulates or flows as aforesaid. The current of air passes from pipe *f* across these tubes, its temperature being reduced to about that of the atmosphere by the first series *c*, and still further by the second series *d*, the water flowing through which becomes heated to about the temperature of the atmosphere, and is allowed to flow away by the pipe *g*. The third series *e* serves for the final chilling, and the iced water is circulated through the tubes, and a vat *i* packed with ice, by a suitable pump *h*. The quantity of ice in the vat *i*, and the speed of the pump, may be adjusted to keep the temperature of the circulating water as near

0° C. as may be desired, but by varying the speed of the pump the temperature of the tubes *e* may be varied from 0° C. to nearly the temperature of the atmosphere, so that if at any time perfect condensation is not required the consumption of ice may be economised.

The air having passed over the condenser tubes issues into a chamber *k*, where it expands and deposits the rest of its vapour; this chamber may contain perforated plates, or any other known device for facilitating the deposition of condensed liquid.

The iced water condensers, the condensing chamber, the ice vat and the circulating pipes are suitably jacketted to economise ice. A gauge *l* fitted to the ice vat *i* and the water in the latter is kept at an approximately constant level notwithstanding the successive additions of ice and the fusion thereof, by adjusting a cock on the pipe *g* and thereby determining what proportion of the water that is pumped through the condenser *e* shall pass through the condenser *d*

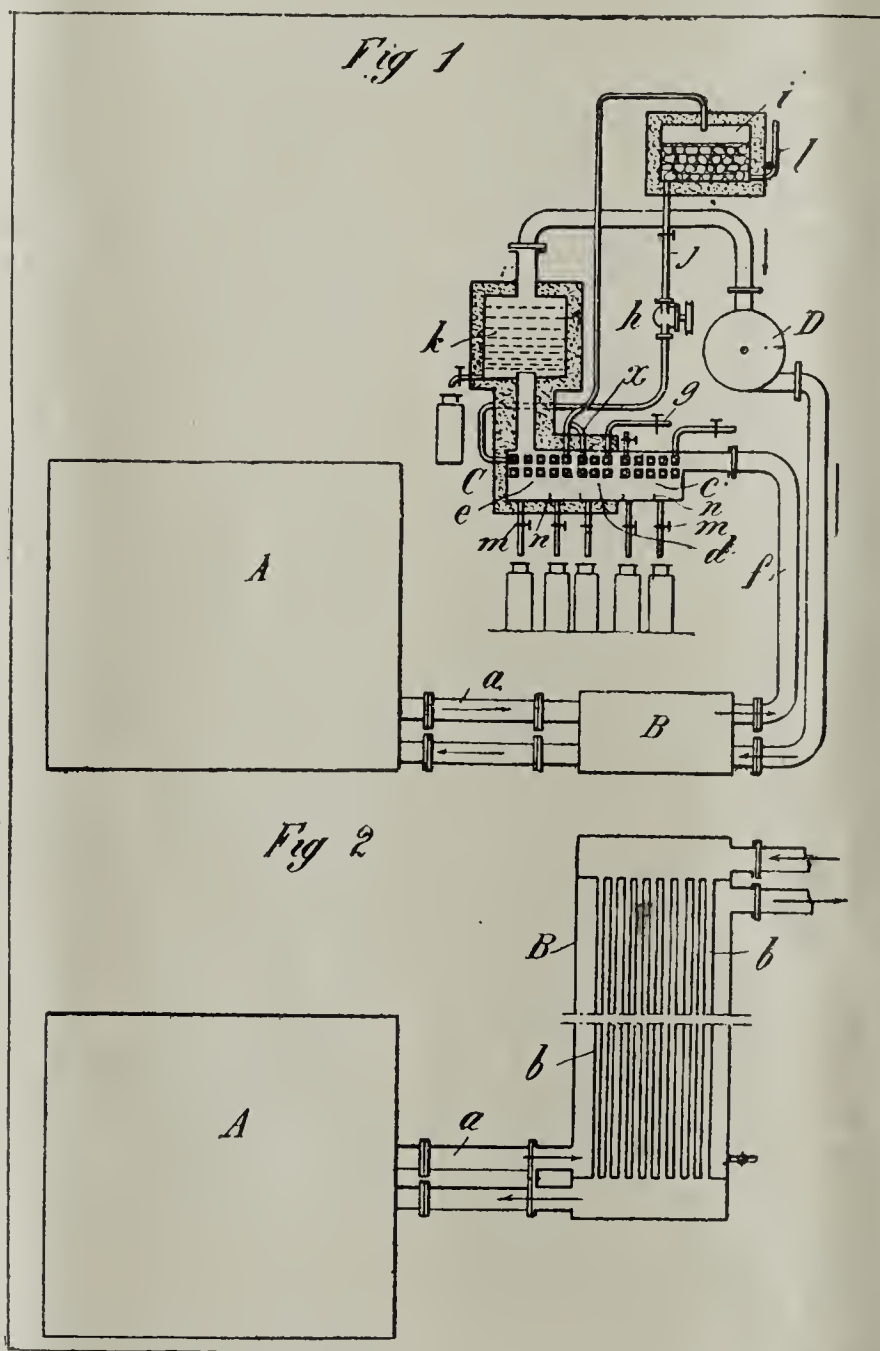
by way of the branch pipe *x* instead of being returned to the vat *i* through the pipe entering the top thereof.

The surface condenser and the condensation chamber are provided with draw off cocks *m* for removal of the condensed liquid.

To collect the condensed liquid in fractions the lower part of the chamber containing the three series of condensers may be subdivided by partitions *n* into compartments, so that the drops falling from each series may be kept separate and drawn off by a separate cock.

For the tube condenser any other form of surface condenser may be substituted, and instead of iced water an otherwise appropriately cooled fluid may be used in the condenser.

The air withdrawn from the condensing chamber by the fan D is forwarded by the latter to the heat exchanger, through the pipes of which it passes into the heating chamber A.



THE CONDITION OF THE GROSNY OIL FIELDS.

During the whole time that the Grosny oil fields have been in exploitation there has been extracted from them in round figures about 360,000,000 poods of crude oil. The area in exploitation is 688½ acres, while there are 256½ acres still awaiting development.

The number of producing wells on the 1st of January (o.s.), 1906, was 205, including those which have now become abandoned or have yielded but little in their best days. This figure clearly shews the want of energy displayed in the development operations, which is more clearly demonstrated by the fact that the number of productive wells has gone beyond 200, the majority of these being crowded together on several plots, whilst there are many plots where wells are few and far between.

On the 1st of January, 1906, the total number of wells, productive and non-productive, drilled since the field first began to be developed is 298, which are divided up as follows:—In exploitation, 137; in drilling or deepening, 46; inactive, 47; abandoned, 57; and 11 where derricks have been erected, but drilling not started. This total does not include the three wells sunk without result in the valley of the Neftianka river.

A careful examination of the figures shew that no small amount of capital has been expended on wells which promised little or no success. The majority of the abandoned wells owe their condition not to any damage or defective drilling, but to the fact to having been sunk at places where no oil could be found. Naturally as time went and experience was gained, the number of uselessly started wells decreased. Among the inactive wells, the majority are damaged or in such a condition that their deepening would not be of any use.

To shew the amount of development work done by the various firms operating at Grosny, and the results achieved by them, we give some particulars of the condition of the various plots in the Grosny oil fields, at the beginning of this year:—

The AKHVERDOFF Co. own eight plots of petroliferous land, of an area of 238.6 acres. They have altogether drilled 87 wells. Of these, 33 are now productive, 14 are in drilling or deepening, 17 are inactive, 5 are derricks only and 18 are abandoned.

The SPIES PETROLEUM CO., LTD., own five plots, of an area of 135 acres. They have 59 wells, of which 36 are in exploitation, 10 in drilling or deepening, 2 inactive, 1 derrick only and 10 abandoned.

The ANGLO-RUSSIAN MAXIMOFF Co., LTD., own one plot, of 27 acres. They have drilled a total of 29 wells, of which 14 are in exploitation, 7 are in drilling, and 8 are abandoned.

The KASBECK SYNDICATE, LTD., own three plots, of a total area of 81 acres. They have altogether 13 wells, 6 of which are in exploitation, 3 in drilling, 3 inactive and 1 abandoned.

The RUSSIAN STANDARD Co. own five plots, of an

aggregate area of 134.2 acres. They have laid down 17 wells, of which 11 are in exploitation, 2 in drilling, 2 inactive, and 2 are derricks only.

The MOSCOW Co. own one plot, of an area of 81 acres. They have 18 wells, of which 4 are in exploitation, 9 inactive, and 6 abandoned.

The NORTH CAUCASIAN Co. possess two plots, of a total area of 54 acres. On these there are 13 wells, of which 9 are in exploitation, 2 in drilling, and 2 derricks only.

The GROSNY OIL Co. own five plots, of an aggregate area of 133.7 acres. They have 5 wells, of which 2 are in exploitation, 1 in drilling, and 2 inactive.

The CASPIAN AND BLACK SEA SOCIETY has two plots, of an area of 54 acres. On these there are 3 wells: 2 producing, and 1 abandoned.

The TCHELEKEN-DAGHESTAN Co. has also two plots, of an area of 54 acres. There are 10 wells: 8 in exploitation, and 2 in course of drilling.

The ALKHAN-YURT Co. own three plots, of an area of 43.3 acres. On these there are 4 wells, of which 3 are in drilling, and 1 abandoned.

The ST. PETERSBURG Co. own one plot of 27 acres, on which there are 11 wells: 8 producing, and 3 inactive.

Mr. KHOLODOVSKY has also one plot of 27 acres, on which there are 3 wells: 2 in exploitation, and 1 inactive.

The VLADICAUCASIAN Co. possess one plot of 27 acres on which there are 3 wells: 2 producing, and 1 derrick only.

The EXECUTORS OF MR MAXIMOFF owns one plot of 27 acres, on which there are 2 wells: 1 in drilling, and 1 derrick only.

Mr KUZMIN has one plot of 19.3 acres, on which there is one well, at present inactive.

The FIRST GROSNY PETROLEUM Co. own a plot of 27 acres, on which there are 3 abandoned wells.

Mr. BASKAKOFF owns one plot of Cossack land of an area of 27 acres, on which there is 1 abandoned well. He also owns 1,442.6 acres of freehold land, on which there are 3 abandoned wells.

Mr. WATERKEYN owns one plot of 27 acres, on which there is 1 well, now inactive.

The BAKU NAPHTHA Co. own one plot of 27 acres, on which there is one abandoned well.

Mr. CHAMBERS owns a plot of 27 acres, with one abandoned well.

The KAIA-KENT Co. has a plot of 12.9 acres, with 1 inactive well.

Mr. DURRANT and Mr. WHISHAW have each one plot of 27 acres and 1 abandoned well.

The PETROLEUM Co. own one plot of 14.6 acres with 1 inactive well.

Mr. KLEIN has one plot of 27 acres, with 3 wells, of which 1 is in drilling, 1 inactive, and 1 abandoned.

Mr. GLIEBOFF owns a plot of 27 acres, with 1 inactive well. The ROSTOFF Co. has a plot of 27 acres with 1 abandoned well, and Mr. JAMES MACGARVEY possesses a plot of 27 acres with 1 inactive well.



A ONCE FAMOUS SPOUTER IN THE FIELD.

THE CALORIFIC VALUE OF PETROLEUM.

In one of the most recent contributions by Mr. F. H. Oliphant, the Chief of the U.S.A. Geological Survey, to technological literature, a most interesting chapter is given upon the calorific value of petroleum.

The calorific or heat-producing property of petroleum when combined with proper proportions of air is, it should be mentioned, measured by the number of pounds of water from and at 212° F. evaporated by 1 pound of petroleum fuel. It has also been determined that the heat energy necessary to evaporate 1 pound of water would raise 966 pounds of water at or near 39.1° F., which is usually written B. T. U., for British Thermal Unit.

The French thermal standard is the "Calorie," and is the quantity of heat necessary to raise one kilogramme (2.2046 pounds) of water 1° centigrade (1.8° F.). The "B. T. U." is therefore only equal to 0.252 calorie.

COMPARATIVE CALORIFIC VALUE OF FUEL PETROLEUM FROM THE PRINCIPAL FIELDS OF THE UNITED STATES AND FROM RUSSIA.

Locality.	Specific Gravity.	Degs. B.	Actual pounds of water evaporated in Boilers at 212° F.	Theoretical pounds of water evaporated at 212° F.
Pennsylvania Crude ..	0.8291	40	14.85	19.75
Pennsylvania Crude (heavy) ..	0.8860	28	16.00	21.46
Ohio, Lima ..	0.8383	37	15.45	20.60
Texas, Beaumont ..	0.9210	22	14.80	20.16
Texas, Sour Lake ..	0.9333	20	14.40	19.62
Louisiana, Jennings ..	0.9090	24	14.60	20.01
California, Bakersfield .	0.9589	16	14.20	19.67
Russia, Baku ..	0.8805	29	14.80	20.67

Mr. Oliphant points out that there is a larger variation in the fuel value of coal than there is in the fuel value of petroleum. For convenience of comparison of petroleum and coal, it is assumed that 1 pound of average petroleum will evaporate 15 pounds of water from and at 212° F. as compared with 9 pounds of water from 1 pound of coal.

The best fuel results are secured when petroleum is atomised by compressed air, but steam is most generally used for this purpose. Fuel petroleum that is to be transported in ships or stored within buildings, should not contain any naphtha or other light constituents. It should have a flash test at from 170° to 220° F. Its gravity should be from 0.9333 to 0.9032, or from 20° to 25° B. Much heavier fuel oils have been used successfully, but they are more apt to clog the strainers and to carry a percentage of water in suspension. The oils of heavier gravities when sold by measure and free from water have given results almost equal to the lighter grades. One of the main conditions necessary for economical results is to have the petroleum properly atomised and mixed with the right proportion of air. It is also important that the combustion take place in a chamber that is partially separated from the cold sheets of a boiler by fire brick or asbestos. Where the space in the combustion chamber will permit, an arch of fire brick is built over the grate bars within five or six inches of the bottom of the boiler and parallel to it, about every fourth brick being left out. Inside of this open arch a checkerwork of loose brick should be placed, upon which the atomised petroleum should spray. The isolated condition of this combustion chamber causes a thorough mixture and an intense heat. In marine boilers space may not allow this arrangement. In such boilers the sides and back should be lined with fire brick, and an arch be projected from the bridge

(wall) one-third of the height of the fire box. Good combustion does not produce any smoke.

Internal combustion engines using crude petroleum, refined petroleum, and naphtha have been successfully operated, and are the most economical, saving 46 per cent. over the high efficiency of the combination of boiler and engine with triple expansion and condenser. The following comparisons are based on the indicated horse-power per weight of 310 pounds, which is equal to one barrel of ordinary crude petroleum, which under favourable condition will evaporate 15 pounds of water per pound of petroleum, and that one brake horse-power can be secured from the evaporation of 16 pounds of water. For comparison there are 310 pounds of naphtha, and 310 pounds are used of natural gas.

High duty engines using best lump coal under boiler 310 pounds = 190 brake horse-power hours.

High duty engines using petroleum under boilers 310 pounds (1 barrel) = 291 brake horse-power hours.

Internal combustion engines using crude petroleum 310 pounds (1 barrel) = 424 brake horse-power hours.

Diesel internal combustion engines using crude petroleum 310 pounds (1 barrel) = 517 brake horse-power hours.

Automobile internal combustion engines using 70° B. naphtha 310 pounds (1.4 barrels) = 530 brake horse-power hours.

Natural gas high duty engines, 10 cubic feet per horse-power, 310 pounds (6,800) cubic feet = 680 brake horse-power hours.

Comparing the results of the power derived from coal, petroleum and its products, and natural gas by the different methods for equal weights of each under the conditions named, and considering coal as 1, we get the following ratios: Petroleum under boilers, 1.53; petroleum in internal combustion motors, 2.23; petroleum in the Diesel motor, 2.72; naphtha, internal combustion engine, 2.79; natural gas, internal combustion engine, 3.58. Therefore, 3.58 times the power is secured from 310 pounds of natural gas that can be secured from the same weight of coal by the methods described.

THE MOSCOW-VOLGA PETROLEUM CO.

INCREASE OF CAPITAL.

An extraordinary general meeting of the Moscow-Volga Petroleum and Trading Co., Bebe-Aibat, took place at Moscow, on June 25th, at which the question was considered of the acquisition by the company of plot No. 27 at Bebe-Aibat, now belonging to Messrs. T. Markarianz, Skrepinsky and Co., plot No. 5 belonging to the Andreef Co., and also a plot of four dessatines in Bebe-Aibat Bay belonging to the executors of Mr. Lebedinsky. It was agreed to purchase all these plots, and to make a new issue of shares for 1,200,000 roubles, of which 750,000 roubles will be taken by the vendors for the lands, the remainder to be offered to the shareholders for subscription. The capital of the company will thus be brought up to 2,400,000 roubles and the area of lands to 24 dessatines.

A New Oil Company.—A new Canadian oil company has just been registered. Its title is the West Ontario Oil Co., and its capital is \$100,000. Another company which has recently been formed is called the Canadian Transit Co., its objects being to deal in oils, oil wells, and to transport, refine, and in other ways traffic in oil.

The American Oil Market.

New York, Week ended July 7th.

The reports from the older producing States shew a falling off in the number of completions during the past week, but there has been a fair sprinkling of good producers, though the average has not greatly improved, and the preponderance of the completions has been of small pumpers, while the percentage of failures to find oil continues large. The field situation as shewn by the monthly reports for June has undergone no important change, although there was an increase in the number of completions and the new production shewed a further increase. The average production of the June wells was somewhat better, says the *Oil, Paint and Drug Reporter*, but the producers insist that the average is still too low to make the search for oil especially tempting, and it is only the hope that the drill may tap a prolific vein that encourages the operator. As about one well in five is unproductive, the chances are far greater for encountering dry sand than of obtaining a large producer. Considerable work is being done in advance of defined limits in the hope of establishing extensions or of discovering a new pool, but the results of this class of operations has not been entirely satisfactory, and tends to increase the percentage of dry holes. Considerable shooting of old wells has been resorted to of late, and, as a rule, with gratifying results, in some cases the production being increased to an amount exceeding the initial production. The scarcity of producing territory in the Eastern fields has caused many operators to migrate to the Illinois and other Western fields. All engaged in operating in the Illinois field have not entirely severed their connection with the East, but they are devoting more time to developing their holdings in the West than in the old fields. Work of developing the Illinois field is only beginning, it is claimed, and if the same degree of success attends operations as has been noted in the primary stage, then the supply of the lower grade of crude will be largely increased, and with the Mid-continent fields undefined and more oil than can be taken care of, the outlook for better prices for the lower grades can scarcely be expected to improve while the present conditions continue.

REFINED AND PRODUCTS.—The demand for refined for export has been active during the past week notwithstanding that there has been an interruption to business by the national holiday. The conditions abroad warrant the belief that the requirements of the European markets will continue large, as there is little prospect of early active shipments of Russian oil to compete with the American product. Conditions in the Russian oil industry improves slowly, and there appears to be no change in the transportation problem. The engagements during the past week have exceeded 300,000 barrels, nearly all for shipment in bulk.

The price for barreled oil has remained firm at 7.80c. for New York loading, and at 7.75c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are firm at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. 0d. to Continental ports, as to port and vessel.

Cases for export have been in light request, and sales of about 50,000 are reported. The price of plain tops has been steady at 10.30c. Freight rates are firm.

Crude for export has been in good request, and sales of about 50,000 barrels are reported. Pennsylvania crude is quoted at 7.80c. in barrels.

Crude naphtha continues firm. For export, sales of about 30,000 barrels have been reported.

CLOSING QUOTATIONS.

CRUDE.	Week ended	
	June 30. 1906.	July 7. 1906.
National Tran, Certificates, per bbl.	\$1.64@1.65	\$1.64@1.65
Pennsylvania crude in bbls. per gal.	7.75	7.75
Pennsylvania crude in bulk	4.70	4.70
Residuum, bbls. for export	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

	Week ended	
	July 7. 1905.	July 7. 1906.
Tiona	1.42	1.74
Pennsylvania	1.27	1.64
North Lima	0.86	0.98
South Lima	0.81	0.93
Indiana	0.81	0.93
CANADIAN OIL:		
Petrolia	1.26	1.37

REFINED—FOR EXPORT.

	Week ended	
	June 30.	July 7.
Cargo Lots for export.. per gal. ..	7.80	7.80
In bulk	4.70	4.70
Philadelphia loading	7.75	7.75

REFINED IN CASES—110 FIRE TEST.

	Week ended	
	June 30.	July 7.
5,000 to 10,000	10.35	10.35
1,000 to 5,000	10.50	10.50

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

	Week ended	
	June 30.	July 7.
120 fire test, S.W. .. per gal. ..	12	12
130 fire test, S.W.	12½	12½
150 fire test, W.W.	13	13
In bulk from tanks	10	10
300 fire test	12½@13½	12½@13½

NAPHTHA AND GASOLENE.

	Week ended	
	June 30.	July 7.
Naphtha, crude, car lots, 68 @ 72 deg.	12.00	14.00
Gasolene 86 deg.	22.00	22.00

PENNSYLVANIA OIL RUNS from June 29th to July 5th were:—June 29th, 81,467; June 30th, 86,671; July 2nd, 44,157; July 3rd, 94,730; July 4th, 24,346; June 5th, 32,219. For the month of May, 2,344,080.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—47,680; 62,266; 47,143; 84,812; 83,306. For the month of May, 2,171,645.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended July 6th and from Jan. 1, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	335,900	5,849,500	6,079,300
Refined, cases	—	7,892,000	12,232,000
Crude, barrels and bulk ..	52,300	880,500	643,800
Crude, cases	—	227,000	152,000
Naphtha, barrels	29,500	240,300	326,300
Residuum, barrels	33,900	467,700	494,500
Lubricating, barrels	6,000	182,100	92,200
Total, barrels cde. eq. ..	275,436	12,411,963	14,005,327

CLEARANCES FOR THE WEEK.

During the week ended July 6th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	6,172,329	241,760,559	261,208,471
Crude	—	229,050	748,344
Naphtha	999,500	11,291,507	8,059,713
Residuum	—	1,000	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended July 6th ..	8,229,772
Total from New York, from Jan. 1, 1906 ..	323,259,809
Same period last year	349,626,307
Decrease	26,366,498
From United States, week ended July 6th ..	27,344,171
Total from United States, since Jan. 1, 1906 ..	605,770,917
Same period last year	647,412,505
Decrease	41,641,588

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The "Review" Shipping List.

JULY 19, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE	Philadelphia	Sables d'Olenne	Arr. June 22	GOLDMOUTH	Cardiff	Singapore	P. Sagres, July 11
ALCHYMIST	Algiers	Salzaete	L. July 13	GUT HEIL	Philadelphia	Havana	L. July 10
AMERICAN	Honolulu	Del. Break.	L. Hilo, June 10	HAINAUT(Dch.shp.)	Antwerp	Galatz	Arr. July 5
APPALACHEE	—	—	At Yokohama, July 7	HARRY WADSWORTH	Ibrail	Campana	Sp. June 22, S. 32 W.
APSCHERON	Tyne	Batcum	P. Dardanelles, July 11	HELIOS	New York	Hamburg	Arr. June 16
ARAL	Tyne	Philadelphia	P. Butt of Lewis, July 5	HOTHAM	Port Arthur (Texas)	Rouen and Antwerp	Arr. Norfolk (Va.) June 29
ARAS	Batoum	London	P. Gibraltar, July 17	HOUSATONIC	Kakodadi	San Francisco	Arr. June 18
ARGYLL	San Francisco	Honolulu	Arr. July 2	IMPERIAL	—	—	Tr. on Lakes btn. U.S. and Can
ASTRAKHAN	Tyne	Philadelphia	P. Dunnet Head, July 11	JOANNIS COUTZIS	Piræus	Batoum	Arr. Consti'ple, July 8
AUGUST KORFF	Tyne	Philadelphia	L. July 17	J.B.AUG.KESSLER	Pulo Samboe	St.Cath'rine's Point	P. Anjer, June 6
AUREOLE	Barry	Batoum	Arr. Const'ple, July 13	JAMES BRAND	Tyne	Philadelphia	Arr. July 12
AZOV	—	—	Trading on W.C. of South Amca.	KURA	Valla	Blyth	Arr. July 3
BAKU STANDARD	Tyne	Philadelphia	L. July 17	LA CAMPINE	Antwerp	Philadelphia	L. July 18
BALAKANI	London	Hull	Arr. July 13	LA FLANDRE	Ghent	Philadelphia	P. Scilly, July 10
BATOUM	Philadelphia	Manchester	L. July 17	LA HESBAYE	Batoum	Antwerp	P. Gibraltar, July 13
BAYONNE	Genoa	Philadelphia	At Gibraltar, July 17	LA MADALEINE	St. Louis (Rhône)	Antwerp	Arr. June 11
BEACON LIGHT	Port Arthur (Texas) & Norfolk (Va.)	London	P. Cape Henry, July 6	LA VIGUESA	Marcus Hook	Gijon	Arr. May 13
BEME	Rangoon	Bombay	L. June 29	LACKAWANNA	Bangalis	Bremerhaven	Arr. July 11
BI OOMFIELD	New York	Bombay	Arr. July 11	LE COQ	Pauillac	Tyne	Arr. July 12
BORJOM	Batcum	Alexandria	Arr. Const'ple, July 8	LOUTSCH	Messina	Novorossisk	Arr. Constani'ple May 5
BRILLIANT	Rotterdam	New York	P. Dover, July 15	LUCERNA	Philadelphia	Bergen	L. July 11
BROADMAYNE	Tyne	Philadelphia	P. Dunnet Head, July 15	LUCIFER	Hamburg	Tyne	L. July 17
BULLMOUTH	Kobe	—	L. July 17	LUCIGEN	Tyne	Philadelphia	P. Dunnet Head, June 16
BULYSESSES	Cardiff	Balekpappan	P. Barry Island, July 11	LUCILINE	Rouen	Philadelphia	L. July 6
BURGERMEISTER PETERSEN	Philadelphia	Oxelosund	L. July 14	LUMEN	Bergen	Tyne	Arr. June 21
CADAGUA	Alicante	Philadelphia	L. Gibraltar, July 12	LUX	Kustendje	—	At Constanti'ple June 12
CALCUTTA(Br.bq.)	San Francisco	Shanghai	Arr. June 4	MAKKAWEI	—	—	Trading in Black Sea
CARDIUM	Singapore	—	L. June 25	MANHATTAN	Kustendje	Venice	Arr. Const'iple, July 10
CAUCASIAN	Philadelphia and Cardiff	Liverpool	Arr. July 12	MANNHEIM	Philadelphia	Malmö	P. Dunnet Head, July 16
CHARLOIS	Antwerp	Philadelphia	P. Scilly, July 13	MARGARETHA	Kustendje	Leghorn	At Naples, July 10
CHESAPEAKE	Liverpool	Philadelphia	L. July 4	MEXICAN PRINCE	Cienfuegos	Liverpool	Arr. July 11
CHESTER	Antwerp	Batoum	Arr. Const'ple, July 13	MIRA	Muroran	Singapore	L. July 14
CIRCASIAN PRINCE	—	—	Trading on W.C. of South Amca.	MUREX	Hong Kong	Palembang	Arr. July 13
CLAM	Balekpappan	Samboe	Arr. July 11	NARRAGANSETT	London	Tyne	Arr. July 11
COWRIE	Barrow	Cardiff	Arr. July 10	NERITE	—	—	Trading in China Seas
CYMBELINE	Batoum	Antwerp	P. Galata, July 18	NEW YORK	Southampton	New York	140 ms. W. of Browh'd, July 15
CZAR NICOLAI II.	Hamburg	Batoum	P. Dover, July 7	OCEAN	Philadelphia	Amsterdam	L. July 9
DAGHESTAN	Batoum	Hamburg	Arr. July 17	ORANJE PRINCE	Tyne	Manzanillo	L. June 25
DAKOTAH	San Francisco	Shanghai	Arr. July 18	ORIFLAMME	Philadelphia	Havre and Rouen	L. June 13
DELAWARE	Dublin	Philadelphia	P. Fastnet, July 18	OSCEOLA	Brunswick & Norfolk (Va.)	Rio Janeiro	P. Cape Henry, July 8
DEUTSCHLAND	New York	Hamburg	L. July 11	OTTAWA	Tampico	New York	Arr. June 26
DIAMANT	Philadelphia	Copenhagen	L. July 15	OURAL	Tyne	Batoum	L. July 11
ELAX	Soesoe	Singapore	Arr. July 17	PALEMBANG	Singapore	Foochow	L. May 31
ELISE MARIE	Philadelphia	Hamburg	Arr. July 2	PAULA	New York	Lisbon	Arr. July 14
ENERGIE	Hamburg	Philadelphia	L. Tyne, July 8	PECTAN	London and Emden	Galveston	Arr. July 17
ERIVAN	Manchester	Philadelphia	Arr. July 18	PENNOIL	Rotterdam and Tyne	Philadelphia	P. Dunnet Head, July 7
EUPLECTELA	Hull	Tyne	Arr. July 15	PERLAK	Calcutta	Aroe Bay	Arr. July 19
EXCELSIOR	New York	Flushing	L. July 15	PHOEBUS	New York	Hamburg	P. Scilly, July 18
EZIO	—	—	Coasting Peru	PINNA	London	Kustendje	Off Finisterre, July 15
FRANCE MARIE	Philadelphia	Palma	P. Del. Break., June 23	POTOMAC	Plymouth	Tyne	Arr. July 16
GELSTEMUNDE	Gothenburg and Tyne	New York	P. Dunnet Head, July 10	PROMETHEUS	New York	Rotterdam	Arr. July 17
GENESSE	Tyne and Sunderland	New Orleans	At Newport News, July 14	PRUDENTIA	Sulina	Rouen	P. Peniche, June 13
GEORGIAN PRINCE	Philadelphia	—	L. July 11	RION	Batoum	Belfast	P. Sagres, July 15
				ROCK LIGHT	Port Arthur (Texas)	Dover	P. Cape Henry, July 7
				ROSSIJA	Novorossisk	Hamburg	P. Gibraltar, July 18-19

Vessel.	From.	For.	Latest Date and Position.
ROTTERDAM (Now C. F. Tietgen)	New York ..	Copenhagen	Arr. July 10
RUSSIAN PRINCE	Philadelphia	Havana	P. Del. Break, July 9
SALAHADJI	Singapore ..	Balekappan	L. June 8
SEMINOLE	Calcutta	San Francisco	L. June 27
SILVERLIP	Balekappan	—	L. July 16
SINGU	Rangoon....	Mormugao ..	L. July 6
SNOWFLAKE	Antwerp	Newport	Arr. July 12
SOPHIE	Batoum	Genoa	Cl. Constant'ple, July 12
SPONDILUS	Samboe	—	L. July 16
STANDARD	Stockholm ..	New York ..	P. Dunnet Head, July 16
STROMBUS	Singapore & Thameshaven	Rotterdam ..	Arr. July 18
SURAM	Tyne	Batoum	P. Beachy Head, July 14
SUWANEE	London	Kustendje ..	Cl. Constant'ple, July 13
SVIET	Batoum	Odessa	L. June 1
TELENA	Calcutta	—	L. July 14
TEREK	London	Batoum	L. July 18
TIFLIS	Batoum	Antwerp	Arr. July 16
TIOGA	Liverpool ..	Manchester	Arr. July 17
TONAWANDA	San Francisco	Shanghai ..	L. July 6
TROCAS	Balekappan	—	L. July 15
TURBO	Philadelphia	—	L. July 12
TUSCARORA	San Francisco	Kurrachee ..	L. July 4
TWINGONE	Rangoon....	Madras	L. June 25
VEDRA	Barry	Batoum	Arr. July 17
VILLE DE DIEPPE	Dieppe	Havre	Arr. Apr 26, in pt., July 12
VILLE DE DOUAI	Rouen	Hull	Arr. July 15
VOLUTE	Soesoe	—	P. Singapore, June 30
WEEHAWKEN	New York ..	London	L. July 3
WILLKOMMEN ..	London	Aarhus	P. Butt of Lewis, July 13
WINNEBAGO (late Kiusman)	San Francisco	Shanghai ..	L. June 19

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

July 20th, 1906.

The price of petroleum is unchanged since our last report, quotations remaining as follows:—Russian and Roumanian, 5 $\frac{3}{4}$ d.; American, 6 $\frac{1}{4}$ d.; Water White, 7 $\frac{3}{4}$ d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £7 to £9 10s.

American dark cylinder, from £7 2s. 6d.

American filtered cylinder, from £11.

No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine is quoted for Spot, 43s. 6d.; September to December, 43s. 4 $\frac{1}{2}$ d.

LIVERPOOL OIL MARKET.

July 19th.

Refined oils are quiet, and sellers now quote 5 $\frac{7}{8}$ d. for Russian, Galician or Roumanian; and 6 $\frac{3}{8}$ d. to 7 $\frac{7}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, July 19th.

Refined, in cases, is firm at 10.30; Standard White, 7.60; Credit balances, 1.58c.

PHILADELPHIA, July 13th.

Standard White is quoted at 7.55.

RUSSIA.

BAKU, July 14th.

The Baku oil market is very firm. The prices are: Light crude oil, spot, 28 $\frac{3}{4}$ -29 copecs per pood; kerosene, in ships, spot, 30 $\frac{3}{8}$ copecs; residuals in ships, spot, 31 copecs, July-August, 30 copecs.

BELGIUM.

ANTWERP, July 14th.

The petroleum market is unchanged. Price of Standard White, spot, 19 $\frac{1}{2}$ francs per 100 kilos.; August, 19 $\frac{5}{8}$ francs, and four last months of the year 20 francs.

FRANCE.

PARIS, July 14th.

Illuminating oil is quoted in bulk, in whole tank waggons, 20.25 francs per hectolitre; spirit, 25.25 francs per hectolitre. Special white oil, 28.25 francs per hectolitre.

GERMANY.

HAMBURG, July 16th.

The kerosene market is firm. The price of American Standard White is 7.10 marks per 50 kilos.

ROUMANIA.

July 14th.

Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs.	...	3.60-3.70
Refined oil, exclusive of taxes	...	9.00- —
Motor benzine, including taxes	...	16.00-18.00
Benzine, doubly refined	...	24.00-25.00
Residuals in tank waggons, at refinery	...	3.00- —
Paraffin	...	120.00-125.00
Lubricating Oils —		
Agricultural...	...	30-32
Prime	...	35-37
Extra	...	40-42
Royal	...	45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilo.

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.00
Benzine, sp. gr. 0.710-0.715	11.00-12.00
" sp. gr. 0.720-0.725	8.00- 9.00
" sp. gr. 0.735-0.760	6.00- 7.00

INDIA.

BOMBAY, June 29th.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	.. ..	Rs. 6 0 2
" Chester, 125 deg.	.. ..	4 8 0
" Monkey Brand, 125 deg.	.. ..	4 2 2
" Bulk, 125 deg. (in local made tins)	.. ..	3 10 0
" " 125 deg. (8 Imperial gallons)	.. ..	3 0 0
" "White Camelia" brand, 125 deg.	.. ..	4 0 2

The Asiatic Petroleum Company, Limited.

Current rates are:—

Borneo oils, in tins, per pair	.. ..	3 2 0
Sumatra "Rising Sun," bulk, per unit	.. ..	3 0 0
" " tins, per pair	.. ..	3 10 0
Silverlight cases, per case	.. ..	4 8 2
Russian, "Anchor," cases	.. ..	4 14 0

Messrs. A. I. Mantacheff & Co.

Current rates for Russian Oil are:—

Ram Brand, cases, Rs. 4-4-0 nett, ex-Bombay godowns (small lots).
Ram Brand, cases, Rs. 4-3-6 nett, ex-Bombay godowns (big lots).
Ram Brands, tin, Rs. 3-12-0 nett, per pair, ex-Bombay godowns.
Ram Brand, bulk, Rs. 3-2-0, per 8 Imperial gallons, ex-Bombay godowns.

BORE HOLES FOR OIL

Contracted for by

JOHN M. THOM,

Canal Works,

Patricroft, MANCHESTER.

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED JULY 9TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
July.	LONDON—			
3	Sieveking, Podmore and Co.	Tar oil	2,600	Stockholm
3	Lon. and Thames Haven Oil Wharves (Oural) ..	Lub.	12,500	Batoum
3	Fielder, Hickman and Co...	"	12,320	New York
3	Scott's Wharf ..	"	5,000	"
3	N. J. Fenner & H. B. Adler	"	1,650	"
4	Anglo-American Oil Co. ..	"	42,400	"
4	" ..	Lub.Gr.	600	Philadel.
4	" ..	M. Colz.	20,000	"
4	" ..	Lub.	62,400	"
4	W. H. J. Alexander ..	"	2,400	"
4	Bowring Petro. Co. (Terek)	Lamp	1,360,000	Port Arthur
4	Homelight Oil Co. (Lucigen)	"	1,620,000	Batoum
4	Lucas and Spencer ..	"	2,080	Fiume
5	Grindley and Co. ..	Lub.	2,000	Philadel.
5	Schenker and Co. ..	"	1,030	Antwerp
5	London Oil Storage Co. ..	"	1,760	Hamburg
5	G. W. Sheldon and Co. ..	"	500	Antwerp
5	Consolidated Petroleum Co.	Gas	200	Galatz
6	Anglo-American Oil Co. (Narragansett)	Lub.	104,880	New York
6	" ..	Lamp	2,940,360	"
7	A. Brown and Co. ..	Lub.	2,000	Hamburg
7	G. W. Sheldon and Co. ..	Lub.C.	600	New York
7	Consolidated Petroleum Co. (Balakani)	Gas	890,000	Philadel.
	LIVERPOOL—			
3	Liverpool Storage Co. ..	M.Lub.	13,000	New York
3	" ..	M.Colza	11,000	"
4	W. B. Dick and Co. ..	Lub.	8,910	Philadel.
4	Lon. and N.W. Rail. Co.	"	250	Antwerp
5	Crew, Levick and Co. ..	"	8,560	Philadel.
5	Burnaby and Chantrell ..	Lub.Gr.	2,910	New York
6	W. H. Nott and Co... ..	L.Paste	260	Hamburg
6	Geo. B. Taylor ..	L.Gr.	9,100	Philadel.
6	" ..	Lub.	4,200	New York
9	Liverpool Storage Co. ..	"	200	"
9	J. L. Turnbull and Co. ..	"	4,000	"
9	W. Owen and Co. ..	"	870	"
9	Vacuum Oil Co. ..	"	2,880	"
9	" ..	"	8,360	"
9	Pickford's, Ltd. ..	"	1,070	Hamburg
	BRISTOL—			
3	H. R. James and Sons ..	"	14,800	New York
3	" ..	M.Colza	5,600	"
3	W. Smith and Co. ..	Lub.	38,480	"
3	" ..	Lamp	2,400	"
	BARROW—			
6	Asiatic Petroleum Co. (Cowrie)	Spirit	469,500	Pulo Samboe
	GOOLE—			
6	Goole Steamship Co. ..	M.Lub.	240	Antwerp
	HULL—			
3	W. Gilyott and Co... ..	Lub.	4,000	Trieste

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
3	Wilsons and N.E. Railway Shipping Co.	Lub.	840	Hamburg
3	" ..	"	14,000	"
7	Anglo-American Oil Co. ..	"	30,160	New York
7	Wilson, Sons and Co. ..	"	2,400	"
	MANCHESTER—			
3	Lamport and Holt ..	"	800	"
3	W. Hodgson and Co. ..	L.Gr.	2,530	"
3	Geo. B. Taylor ..	Lub.	29,800	"
3	" ..	"	62,400	Philadel.
3	Crew, Levick and Co. ..	"	25,170	"
3	Meade-King, Robinson & Co.	"	32,600	"
3	Morton and Sons ..	"	1,200	"
3	Diamond Lubricating Co. (Euplectela)	Lamp	784,000	"
3	General Petroleum Co. (Euplectela)	"	224,000	"
5	Meade-King, Robinson & Co.	Lub.	7,200	"
5	" ..	"	10,000	Hamburg
5	J. T. Fletcher and Co. ..	"	480	Antwerp
5	G. Fairclough ..	"	740	New York
5	Bramwell Fern and Co. ..	"	410	"
6	Liverpool Storage Co. ..	"	2,470	"
	NEWCASTLE—			
3	Tyne-Tees S.S. Co. ..	"	120	Hamburg
3	" ..	"	2,440	Antwerp
7	" ..	"	2,120	"
	GLASGOW—			
3	Anchor Line ..	Lamp	7,000	New York
3	" ..	Lub.	67,320	Philadel.
4	J. and A. Allan ..	"	15,840	"
	GRANGEMOUTH—			
3	J. Currie and Co. ..	"	10,960	Hamburg
	LEITH—			
3	J. Currie and Co. ..	"	10,480	"
3	W. G. Yool and Co. ..	Lamp	870	"
5	J. Currie and Co. ..	Lub.	2,400	"
5	" ..	"	800	"
5	J. Cormack and Co. ..	"	4,000	Riga
	CORK—			
4	Palgrave, Murphy and Co..	"	360	Hamburg

Total for the Week .. 9,053,780

Deduct to correct—

LONDON—

21/6 Asiatic Petroleum Co. .. Benz. 1,106,700 Pulo Samboe

FOR THE WEEK ENDED JULY 15TH, 1906—

LONDON—

10	General Petroleum Co. (Euplectela)	Lamp	353,600	Philadel.
10	A. Brown and Co. ..	Lub.	4,000	"
10	W. Balchin ..	"	10,000	"
10	Humphrey and Co. ..	"	5,230	New York
10	J. Hardy ..	"	2,400	"
10	Fielder, Hickman and Co. ..	"	18,400	"
10	T. H. Lee ..	M.Gr.	1,600	Antwerp
11	John Cokerill Line ..	Lub.	150	Ostend

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OIL & OTHER
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PACKED IN SEALED TWO GALLON CANS.

Universally used by all leading Motor
Manufacturers, Motorists, Railway and
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IN USE AND FOR SALE EVERYWHERE.

— QUALITY TELLS. —

To Dealers only.

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	No. OF GALLS.	PORT WHENCE.
July				
11	Mordaunt Bros. ..	Lub.	30,000	Philadel.
11	L. and India Dock Com. ..	"	1,200	New York
12	B. Jacob and Sons ..	"	6,350	Philadel.
12	Anglo-American Oil Co. ..	"	36,000	"
12		M. Colza	20,000	"
13	Asiatic "Petroleum Co." (Strombus)	Benz.	755,800	Pulo Samboe
13	Mordaunt Bros. ..	Lub.	2,500	Philadel.
13	" ..	"	2,500	Baltimore
13	J. Barber and Co. ..	"	800	Hamburg
13	J. Harrison, Ltd. ..	Lamp	130	Antwerp
14	" ..	Lub.	400	Treport
14	E. J. Wilkinshaw ..	"	2,000	Philadel.
14	Schliemars Oil Co. ..	"	2,400	"
14	Fielder, Hickman and Co. ..	"	4,800	"
14	Scott's Wharf ..	"	4,000	New York
16	G. W. Sheldon and Co. ..	"	890	"
16	" ..	"	800	Antwerp
16	Ragosine and Co. ..	"	7,480	S. Petersburg
	LIVERPOOL—			
10	Meade-King, Robinson & Co. ..	"	10,000	Hamburg
10	J. Light and Son ..	"	1,000	New York
10	W. B. Dick and Co. ..	"	51,150	"
11	" ..	"	21,120	Philadel.
11	" ..	"	750	"
12	Crew, Levick and Co. ..	"	11,320	"
12	Worthington and Boler ..	"	5,400	"
12	Valvoline Oil Co. ..	"	13,740	New York
13	Cunard Steamship Co. ..	"	1,760	"
13	Meade-King, Robinson & Co. ..	"	51,200	Philadel.
13	Vacuum Oil Co. ..	"	11,200	"
14	George B. Taylor ..	"	19,120	New York
14	" ..	"	27,360	"
16	Vacuum Oil Co. ..	"	9,600	"
16	Liverpool Storage Co. ..	"	10,400	"
16	W. Gibson and Sons ..	Lamp	2,050	Boston
16	C. W. Field ..	Lub.	210	Antwerp
16	Meade-King, Robinson & Co. ..	Resid.	2,000	Trieste
	BRISTOL—			
10	Pickfords, Ltd. ..	L. Paste	350	Hamburg

DATE	PORT AND IMPORTERS.	DESCRIPTION.	No. OF GALLS.	PORT WHENCE.
July				
10	Western Pet. Co. (Arras) ..	Lamp	61,050	Hamburg
10	H. R. James and Sons ..	Lub.	11,240	New York
10	W. Smith and Co. ..	"	20,000	"
12	Anglo-Bosphorous Oil Co. ..	L. Gr.	480	Hamburg
12	H. Prichard and Co. ..	Lub.	520	"
	GRIMSBY—			
12	J. Sutcliffe and Sons ..	"	550	Antwerp
	HULL—			
10	Wilsons and N.E.R. S. Co. ..	"	360	Hamburg
15/6	Major and Co. ..	C. Naph.	5,050	Reval
12	Ang.-Amer. Oil Co. (Suram)	Lamp	1,104,670	New York
12	" ..	Gas	160,990	"
13	W. Johnston and Co. ..	Spirit	12,000	Rotterdam
	MANCHESTER—			
10	E. Brooke ..	M. Lub.	4,580	New York
13	G. B. Taylor ..	"	48,520	"
13	Bramwell Fern and Co. ..	"	830	"
13	Lamport and Holt ..	"	3,410	"
	NEWCASTLE—			
12	Furness, Withey and Co. ..	"	13,800	"
14	C. Hassell and Son ..	"	97,440	"
	PLYMOUTH—			
12	Ang.-Amer. Oil Co. (Potomac)	Lamp	929,200	Philadel.
12	" ..	Petrolite	358,690	"
	GLASGOW—			
10	Anchor Line ..	Lub.	1,750	New York
10	Burrell and Son ..	"	6,000	Fiume
12	Clyde Shipping Co. ..	"	390	Antwerp
	LEITH—			
10	G. Gibson and Sons ..	"	2,040	"
10	Henderson and McIntosh ..	"	11,800	New York
10	J. Currie and Co. ..	"	860	Hamburg
12	W. Graham, Yooll and Co. ..	Lamp	2,180	"
12	" ..	"	2,180	"
12	J. Currie and Co. ..	Lub.	580	"
	DUBLIN—			
13	Anglo-American Oil Co. (Delaware)	Lamp	1,299,560	"
	Total for Week ..		5,683,880	
	Total for the past Fortnight ..		14,737,660	

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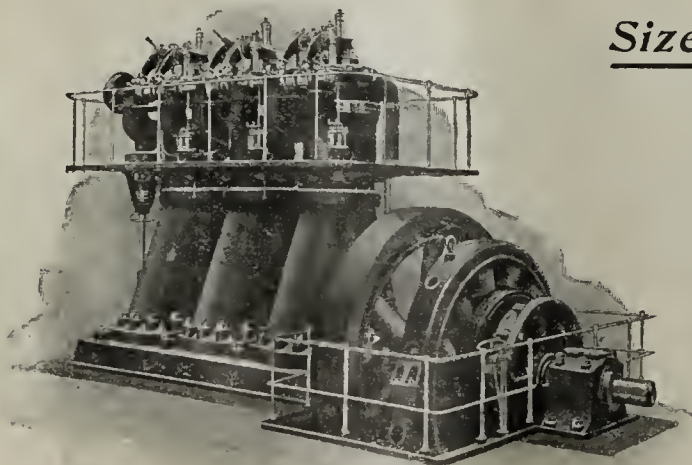
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

AUGUST 4TH, 1906.

No. 378.

Editorial Notes.

What with the continually re-
Six Months' occurring labour troubles and the
Baku generally upset state of Russia, it is no
Production. surprise to find that the total production
for the first half of this year at the
Baku oil fields makes such a poor show when compared
with that of former similar periods. In round figures, it
can be taken that for the first six months of this year
the fields produced about 225,000,000 poods, or a
decrease of 47,000,000 poods when compared with the
figures for January-June, 1905, a decrease of 80,000,000
poods against the total yield for the first half of 1904,
and a deficit of nearly 100,000,000 poods as compared
with the figures of 1903. Having only just received the
figures for June, without which the totals for the half
year could not be compiled, it is impossible to give
many details of the production of the various firms
during the many troublous months we have had so far
this year, but the results of the operations of the various
English concerns which we give below will be of special
interest to our readers. The production of these
respective firms for the half-years of 1904, 1905 and 1906
is as under:—

	1906.	1905.	1904.
Russian Petroleum Co. ..	6,390,000	10,496,000	14,615,000
Baku Russian Co. ..	6,970,000	10,105,000	14,756,060
Schibaieff Co. ..	4,860,000	5,969,000	8,109,000
Bebe-Aibat Co. ..	4,845,000	5,460,000	5,655,000
European Co. ..	2,560,000	4,617,000	6,933,000

The yield from spouters which has been consistently
decreasing for some years has continued its downward
march during the six months, the total yield from the
fountains being about 11,000,000 poods, as against
31,000,000 poods for the first half of 1903, 16,000,000
poods for the first half of 1904 and 14,000,000 poods for
the first six months of last year. Although no accurate
data is yet to hand, it is feared that the second half of
this year has opened sadly for the industry, and to-day
the outlook is anything but re-assuring.

Though from our own sources we com-
American piled a detailed statement shewing the
Production production of the American petroleum
in 1905. fields in 1905, and published this in one
of our issues in the early part of the year,
the complete figures have only been made known during
the past few days. In the main, these shew little
difference when compared with those which we arrived
at six months ago, the total output of all the American
fields being 140,000,000 barrels, the greatest figures on
record, and 20,000,000 barrels gain over the total output
for the preceding year of 1904. Full details are
given elsewhere in this issue, and therefore it is only
necessary here to refer to future development. It is
certainly very probable that the bulk of oil production
in the United States will in future come from the
undeveloped regions in the west and the Mid-continental

fields, where, as a matter of fact, the greatest of energy
is now being displayed among operators. Illinois is also
developing into a remarkable field, and no doubt this
will prove a marked factor in maintaining the average
production for the eastern regions for some time to come.
But even here the trend of extensions is in the west,
which has been the basis for the well defined belief that
operations will spread until Missouri is placed upon the
list of producing States.

By reason of the great amount of
The Standard development work of a successful nature
to the which has for many months been taking
Rescue. place in the American Mid-Continental
fields of Kansas and Indian Territory,
a general lack of storage accommodation has been felt,
in spite of the activity displayed by the Standard Oil
Co. in erecting enormous storage facilities in many parts
of the fields. The more tankage that has been built,
the more acute the situation seems to have become,
until the latest development in this respect promises to
remedy this state of congestion for a long time to come.
Some hundreds of acres of additional land has been taken
by the Prairie Oil and Gas Co. at Ramona, not far from
the existing tank farm, and 200 more tanks are now to
be erected, which will give facilities for the storage of
7,000,000 barrels of crude oil, bringing the total storage
accommodation of this company in Kansas and
Oklahoma to no less than 27,000,000 barrels.

In view of the opinion that prevails
The £ s. d. of in certain quarters, it may be well
the Question. here to go into a few figures as
shewing the £ s. d. of such moves
recorded above. This storage capacity will have cost
the company \$7,000,000 exclusive of the oil. By the
time the whole of the storage is occupied there will have
been expended in cash by the Standard Oil Co. in Kansas
and Oklahoma the sum of \$40,000,000, and from which
investment the only return will be the oil that has been
passed through the pipe lines to the Neodesha, Kansas
City, or Whiting refineries, which is but a small part of
the total quantity bought and stored. On the basis of
60,000 barrels per day taken into the lines, over
\$30,000 per day is disbursed among the producers for
their oil. If a few of these details were carefully studied
by some of the law makers in the States, they would be
a little less rash in the statements made, and would have
no further cause to wonder at the absence of what they
call competition in these Mid-Continental fields.

With the publication of the petroleum
Twelve exports from America for the month of
Months' of June, it is possible to compile the
American petroleum exports from that continent for
Exports. the governmental fiscal year, which ended
with the closing of that month. The ex-
portation of American oil during the year reached figures
which established records both in regard to value and

quantity, Russia's petroleum crisis naturally having much to do with this. A total of 1,190,000,000 gallons were exported during the twelve months just ended, as compared with 1,070,000,000 gallons for the preceding fiscal year, which thus shews that over and above the quantity exported during 1904 there has been an increase of 100,000,000 gallons. True it is, that the valuation of this enormous quantity does not work out at as high a figure as has been the case in past years, yet the added revenue brought to the American refiners by the export of this increased quantity of petroleum products is over \$3,000,000. With the advent of fuel oil on this side of the Atlantic, it may reasonably be assumed that during the present year another record will be established in regard to the exportation of American petroleum products.

THE LATEST FROM GALICIA.

Negotiations are still proceeding between the Galician petroleum producers and the Petrolea Co. with a view to the re-organisation of the last-named company and its relation to the producers. Mr. Rosenbeck, manager of the Petrolea Co., came down from Vienna to Drohobycz to confer in person with the producers.

The majority of the producers, however, entertain but little hope of a successful outcome of these negotiations. There are still several points on which no agreement has yet been reached. This state of uncertainty is

threatening the petroleum industry with a new crisis, and has an adverse influence on the progress of boring operations, which at Tustanowice are limited to the preliminary preparations for starting some borings.

The Naphta-Industrie A.G. are transferring their main boring operations from the Potok road to Tustanowice, where they intend starting three boreholes. On the Potok road the said firm has sunk several wells, without, however, achieving any satisfactory result. On the Litwa property, the production is growing continuously, and has now reached 50 tons per 24 hours. Drilling on this property has been in progress for over a year. Quite recently, a rocky stratum was encountered, and a substantial increase in production is expected after this has been pierced. The Litwa well No. 1 has reached a depth of 985 metres. The first oil stratum in this well was struck at 875 metres, and from that depth the well has been producing steadily for nearly two years, whilst in other wells situated in the immediate neighbourhood of this well, such as Litwa No. 2 and Triumph No. 1, struck their first oil horizon at 935 and 918 metres respectively.

After the fire at the "Aba" well the production of that well ceased entirely, but simultaneously the wells on the "Ewa" plot increased their output and even began to spout. It is asserted that the cessation of output on the "Aba" property coincided also with an increased production on other adjoining plots.

DETAILS OF BAKU PRODUCTION AND BORING IN MAY, 1906.

The following details of the production of crude oil at the Baku oil fields in May are supplied in the latest issue of the *Neftiannoie Dielo* :—

						PRODUCTION (in poods).				Average per Well per Day.
						By Baling.	By Spouters.	Casual.	Total.	
Balakhany	..	..	..	..	581	6,203,272	—	16,946	6,220,218	363
Saboontchi	..	..	..	..	528	14,700,654	60,100	320,895	15,081,649	941
Ramany	..	..	..	..	178	8,062,649	230,140	43,675	8,336,464	1,674
Bebe-Aibat	..	..	..	..	188	12,369,483	62,400	6,300	12,438,183	2,283
Total in May, 1906	..	..	..	..	1,475	41,336,058	352,640	387,816	42,076,514	966
Total in April, 1906	..	..	..	..	1,410	39,705,461	1,382,000	415,143	41,502,604	1,028
Total in May, 1905	..	..	..	..	1,543	38,245,766	612,500	296,347	39,154,612	1,072

In addition to the above there were produced at Binagadi from 12 wells, 29,166 poods.

The production by spouting was obtained from the following wells :—

Field.	Owner.	No. of Plot.	No. of Well.	Production, Poods.
Saboontchi	Nobel Bros.	51C	369	60,100
Ramany	"	140	400	110,290
"	Polak and Co.	62	1	119,850
Bebe-Aibat	Schibaieff Co.	38	6	38,500
"	"	29	4	23,900

The condition of the Baku oil fields on the 1st of June, as shewn in the number of wells of various categories, is given below :—

						In Exploitation.	In Drilling.	Undergoing Deepening, Repairs, Cleaning, Trial Baling, etc.	Abandoned or Temporarily Inactive.	Total.
Balakhany	..	..	..	..	..	571	30	33	502	1,166
Saboontchi	..	..	..	..	..	521	87	90	832	1,547
Ramany	..	..	..	..	..	177	43	55	196	483
Bebe-Aibat	..	..	..	..	..	186	111	75	81	468
Binagadi	..	..	..	..	..	12	—	—	7	19
Total	..	..	..	..	..	1,467	271	254	1,618	3,683

The stocks of crude oil at the oil fields on the 1st of June amounted to 7,272,421 poods, against 6,967,955 poods on the 1st of May, 1906, and 6,515,212 poods on the 1st June, 1905.

The stocks of crude oil and products at the Baku refineries were as follows (in poods) :—

						On 1st June, 1906.	On 1st May, 1906.	On 1st June, 1905.
Crude oil	..	..	..	..	..	12,381,169	18,331,957	28,596,065
Illuminating oil	..	..	..	..	..	9,566,833	10,372,624	15,319,089
Lubricating oils	..	..	..	..	..	2,130,843	2,383,821	1,816,324
Residuals	..	..	..	..	..	37,910,923	42,403,482	56,575,409
Other products	..	..	..	..	..	710,254	778,071	758,060
Total	..	..	..	..	..	62,700,022	74,269,955	103,064,947
Add stocks of crude at the fields	..	..	..	..	..	7,272,421	6,967,955	6,515,212
Total stocks	..	..	..	..	..	69,972,443	81,237,910	109,580,159

installation from the management of the wharf, which is under the direct control of the head office of the company on the Alsterdamm. The installation of the Deutsch-Amerikanische Petroleum Gesellschaft in the petroleum harbour are very extensive. Apart from that 12 large tanks and one small tank, of an aggregate capacity of 167,000 barrels, all comprised in one installation, the company has a large cooperage, turning out up to 3,300 barrels daily. Apart from this there are large supply stores for fitting out and repairing the company's steamers. It may be mentioned by the way that the Deutsch-Amerikanische Petroleum Gesellschaft has another installation at Harburg, consisting of seven tanks of a storage capacity of 70,600 tanks. The company's fleet includes now as many as 18 steamers of 41,000 net registered tonnage, and 84,000 tons loading capacity. In addition there are numerous river steamers. The first tank steamer, "Glückimf," was built in 1886 to the order of Mr. W. G. Riedemann, by Messrs. Armstrong, Mitchell and Co. on the Tyne, of a carrying capacity of 3,000 tons, whilst the largest tank steamer of the Deutsch-Amerikanische Petroleum Gesellschaft, the "Phœbus," carries 8,200 tons.

In conclusion, the author gives a few figures concerning the dimensions of the petroleum harbour as a whole. The length on the left side is 920 metres, or nearly a kilometre. The base is 213 metres, which is also a great width. The smallest width is at the narrowed entrance, namely, about 100 metres. The length on the right side on a straight line is 210 metres. The heads of the two quays which form the petroleum harbour are on a slanting line, 195 metres distant from one another. The whole area of the petroleum harbour should be at least 120,000 square metres.

THE DEUTSCHE RUSSISCHE NAPHTHA IMPORT GESELLSCHAFT.

In view of the recent developments on the German petroleum market, the following particulars of the position of the Deutsch-Russische Naphtha Import Gesellschaft, representing the Russian petroleum interests in Germany, are of interest.

The profit and loss account for the financial year 1905-6 shews that the company during that period has earned a gross profit in round figures of 2,500,000 marks, against 2,700,000 marks earned in the preceding year. Against this there were expenses amounting to 2,360,000 marks, against 2,310,000 marks in the preceding year, and as, moreover, a sum of 380,264 marks had to be written off for depreciation, the accounts shew a loss for the year of 231,676 marks, which is covered out of the reserve fund.

The balance sheets contains the following items:—

	1903-4	1904-5	1905-6
Share capital ..	6,500,000	6,500,000	6,500,000
Reserve ..	580,433	581,104	349,927
Creditors ..	2,641,251	3,033,060	3,277,534
Bills payable ..	482,053	1,105,176	—
Land and installation	6,372,025	7,173,694	7,254,028
Stock of goods ..	2,336,841	2,120,975	1,380,456
Debtors ..	2,219,449	1,828,680	1,334,689

PRODUCTION OF CRUDE OIL IN ROUMANIA IN MAY.

The production of crude oil at the Roumanian oil fields in May, compared with that during April, was as follows:—

	May. Tons.	April. Tons.
Prahova District—		
Bustenari ..	39,147	38,880
Campina-Poiana ..	9,075	12,927
Moreni (part only) ..	1,915	13,460
Baicoi-Tinta ..	8,825	15,302
Other Fields ..	524	405
Total for Prahova ..	59,486	70,974
Dambovitza District (part only) ..	677	1,182
Bacau ..	609	696
Total ..	60,772	72,852

The figures for May, it will be observed, are far from complete, those wanting being the Campina-Moreni Co. and the Moreni Co.'s at Moreni, the Romano-American at Bustenari, and some smaller items, which can be be estimated at about 12,000 tons, bringing the total figure for May up to the level of April. No definite comparison, however, can be drawn until the figures now wanting come to hand. The complete and definite figure of the output for April of 72,852 tons constitutes a record in the annals of the Roumanian petroleum industry.

The output of the leading firms in Roumania during May, compared to April, was as under:—

	May. Tons.	April. Tons.
Steaua Romana—		
Bustenari ..	10,583	9,237
Campina ..	6,799	9,298
Baicoi ..	7,711	3,959
Other Fields ..	344	328
Total ..	25,437	22,822
Bustenari Co. ..	12,267	11,352
Campina-Moreni Co. (part only) ..	1,253	9,551
Telega Oil Co. ..	4,863	5,010
International Co. ..	2,823	3,136
Romano-American Co. (part only) ..	1,915	4,586
Moreni Co. ..	—	3,120
Trajan Co. ..	2,250	2,205
Grigorescu and Vladescu ..	1,225	563
Arnheemsche Petroleum Co. ..	1,011	904
Aquila Franco-Romana ..	1,256	1,051

THE BIBI-EYBAT PETROLEUM COMPANY.

A meeting of the holders of the debentures of the Bibi-Eybat Petroleum Co., Ltd., is to be held at the offices of the company on August 14th for the purpose of considering the following extraordinary resolutions:

1. That the provisions of the debentures as to redemption be varied in the following manner:—

- The date for the payment of the principal sum secured by the debentures shall be November 1st, 1920, instead of November 1st, 1915.
- The date mentioned in the third of the conditions endorsed on the debentures shall be November 1st, 1911, instead of November 1st, 1906.
- The date mentioned in the fourth of the said conditions shall be September 1st, 1911, instead of September 1st, 1906.

2. That no dividend shall be recommended by the board to be paid out of the profits of the company available for dividend in any year prior to the year 1911 until a cumulative sum of £11,000 per annum shall have been set aside as a reserve out of the profits of preceding years, such reserve to be used, at the discretion of the board, in the purchase of debentures or in redemption by drawings.

PATENTS.

Applications for Patents and Patent Applications recently published relating to the Petroleum Industry.

Specially contributed by Messrs. EDWARD EVANS & Co., of 27, Chancery Lane, London, W.C., and 105, Colmore Row, Birmingham, Consulting Engineers, Chartered Patent Agents and Enrolled Patent Attorneys of the United States.

APPLICATION FILED IN GREAT BRITAIN.

Improvements in Apparatus for the Purification of Waste Oil.—Noah Whalton Smith, London. No. 16097 of 1905.

APPLICATIONS PUBLISHED IN GREAT BRITAIN.

Improvements relating to Emulsions of Tar Oils, Phenols and similar Products.—Dr. Walter Spaltehoby, Amsterdam, Holland. No. 13151 of 1905.

This relates to the manufacture of aqueous emulsions from coal tar oils, phenols, and similar products, which consists in using as an emulsifier an alkaline solution of casein or of a product of decomposition of casein glue or similar compound, obtained by heating the same with a base or an acid or by spontaneous decomposition.

Improved Manufacture of Viscid or Fluid Emulsions of Oils, Fats or the like.—Oscar August Hubert Hugo Kisters, Hemelinger, near Bremen, Germany. No. 4688 of 1906.

This relates to the manufacture of viscid or fluid emulsions of oils, fats or the like, by introducing the oil or fat which is to be emulsified into a mixture of water and amide of a higher fatty acid, or of an acidyl derivative of an aromatic base, or both, together with a salt of a higher fatty acid.

AMERICAN APPLICATIONS PUBLISHED.

Oil Distributing Apparatus.—H. W. Stocking. No. 826286.

In an apparatus for distributing oil upon the surface of the sea, a tank, a flexible pipe connecting therewith, anchoring means furnishing a support for the pipe and divergent connections horizontally from the end of the said pipe and connections adapted to discharge oil upon opposite sides of the anchoring means.

Oil Burner.—J. L. Smith. No. 826067.

A burner comprising a hollow base portion, an absorbent in the base portion, a fuel-supply pipe communicating with the interior of the base portion, sleeves disposed within the base portion and engaged in the bottom thereof, a casing disposed upon the sleeves and having openings registering therewith, said casing being open at its top, an open water-receptacle disposed within the casing, water-pipes communicating with the receptacle and extending downwardly through the sleeves, a casing disposed over the first-named casing and lying in spaced relation thereto, a casing disposed over the receptacle and lying in spaced relation to the receptacle and to the first-named casing, and an inclosure for the casings communicating at its lower end with the interior of the base portion, said inclosure having an opening at its top.

Process of Refining and Purifying Hydrocarbon Oils.—D. T. Day. No. 286089.

The process of treating hydrocarbon oils which consists in subjecting them to the action of added hydrogen or absorbable hydrocarbons in the presence of porous absorptive substances, capable of absorbing hydrogen or a hydrogen-carrying gas or vapour.

AMERICAN PATENT GRANTED.

Valve Adjuster for Oil Wells.—Elmer R. Matthews, Hohman, Ohio.

A device comprising an arm-engaging cross head, a tube extending from the cross head, an internally screw-threaded block secured within one end of the tube, a clamp adjustably mounted on the tube, arms radiating therefrom, a threaded stem engaging the block and extending into the tube, means extending through the block and tube for binding the stem to hold it against rotation, a polish rod, a link adjustably connected thereto and swivelled on the stem, arms radiating from the stem, and means extending through the link for binding upon the stem to hold the link and stem against rotation.

THE UNION OIL COMPANY OF CALIFORNIA.

VIEWS OF PANAMA.

We have pleasure in being able to reproduce some excellent views along the line of route of the Union Oil Co.'s Panama pipe line, recently taken by Mr. Beeby



THE CANAL HOSPITAL, PANAMA.

Thompson, of the firm of Messrs. Thompson and Hunter, of Leadenhall Street, E.C.

As is now well known, this enterprise of the Union Oil Co. ranks as one of the most remarkable in the annals of the petroleum industry, for in order to bring



ON THE PANAMA ISTHMUS.

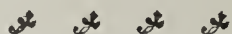
every facility into being for the purpose of rapidly transporting its fuel oil to the European markets, it is now about to complete the laying of a pipe line across the Isthmus of Panama, which fact will open a new era before Californian oil upon these markets.



WHERE THE PIPE LINE STARTS.

It is premature as yet to refer in detail as to the company's plans in this country, but we have already recorded the fact that a fleet of bulk oil carrying steamers has been purchased with a total carrying capacity of nearly 50,000 tons.

The Texas-Louisiana Petroleum Fields.



An Elaborate Investigation.

What is probably the most elaborate and thorough investigation ever conducted by the United States Geological Survey has recently been completed in what is styled the Texas-Louisiana Gulf Coastal Plain. It has been compiled by Messrs. C. W. Hayes, William Kennedy, and N. M. Fennemann, and has been in preparation for a considerable period, the desire of the authorities being to keep up with the developments in this remarkable field, and to present data fully describing the phenomena that have been there observed by practical oil men, with a view to furnishing an accurate basis for future operations. We are indebted to our excellent contemporary, the *Oil, Paint and Drug Reporter*, for a summary of this important publication, which is as yet in the press. From this summary it appears that the accumulation of oil in the Coastal Plain sediments is, in several respects, in strong contrast with the corresponding process in parts of the Appalachian field. In the latter case the reservoir rock, the cap rock, and the formation from which the substance of the oils is believed to be derived are all continuous, without important change of character, over thousands of square miles. The relation of each to the oil is so definite that if, at any place, the age and folds of the underlying rocks be ascertained, the conditions with respect to oil are to a considerable degree known. On the Coastal Plain not only are dips and folds difficult to determine, but the age of a bed gives no clue to its physical character or its relation to oils, if present. Stratigraphy is therefore relatively less important in the study and exploitation of oil in the Coastal Plain fields than in fields of the Appalachian type.

Source of the Hydrocarbons.

Most of the sediments of the Coastal Plain contain small quantities of petroleum. The amount thus disseminated is extremely large, perhaps larger than that which has accumulated into bodies of commercial importance. The distribution is so general that it would be impossible to name any one formation, or any series, as the probable source of the original hydrocarbons. The distribution of oil in very small quantities through hundreds or even thousands of feet of sediment, much of which is highly impervious clay, might be supposed to give plausibility to the assumption of its origin within the beds where it is now found. On the other hand, the enormous quantities found in certain small pools are inexplicable on any such hypothesis.

Movements.

The collection of hydrocarbons into reservoirs of oil is related to the presence of water in at least two ways: (1) The oil is buoyed up by the ground water; (2) the oil must share to some extent in the movements of the water until the former comes to rest under an impervious arch or dome. These statements apply to oil as a liquid lighter than water, but the nature and condition of the

hydrocarbons previous to their accumulation as oil are unknown.

Being buoyed up by the ground water, the oil should rise through the sands of the Coastal Plain sediments until a bed of clay is reached. If porous and impervious beds were here regular in thickness and character, like those in the Appalachian fields, and were similarly folded, the oil would travel to the crests of the anticlines and accumulate in long, narrow pools. The beds of this region are, however, most irregular. No two well sections, even if closely adjoining, exactly correspond. In Ohio alone the Berea sandstone extends over 15,000 square miles with scarcely any variation in thickness and composition. In the Coastal Plain, on the other hand, no single bed can be traced without material modification over 100 square miles. Clay beds graduate laterally into sands, and *vice versa*. Under these conditions the small coastward dip of the sediments is practically negligible in comparison with the much steeper slopes formed by the irregular distribution of sands and clays. A large number of sand beds fortuitously distributed may touch, forming a single body, whose effect on the movements of ground water is that of an inclined stratum.

Not only are such slopes as are here described generally much steeper than the dips, but they conduct the oil now in one direction and now in another, so that the course pursued by the rising fluids may be inconceivably devious, and the vertical component of the resulting movement very large. The lower surfaces of the clay bodies, taken as a whole, are irregular, and do not offer continuous slopes. The oil in its upward movement finds innumerable small pockets or traps in which it comes to rest. It may finally reach the surface and cause "surface indications," or it may accumulate in the sands in bodies of commercial importance as at Saratoga and Jennings.

Accumulation at Spindle Top.

It is not impossible that the extraordinary pool at Spindle Top may have originated by the coming together of oil originally disseminated, but if so, the oil must have travelled very long distances laterally, or the lower sediments in that vicinity must have had a peculiar composition. It is probable that the quaquaversal dip from Spindle Top extends but a short distance beyond the limits of the oil field. If so, the structural slopes, which guided the oil to the pool, must have been due to the irregular distribution of porous and impervious sediments. That such slopes, whose very existence is due to irregular distribution, should be continuous for miles without a break in the impervious cover is remarkable. It is no less surprising that so large a porportion of the oil should have reached the central reservoir instead of being detained in pockets by the way. (To be concluded.)

Oil and Asphalt Prospects in Salt Lake Basin, Utah.

By J. M. BOUTWELL.

The exposure of asphalt by the recent recession of Great Salt Lake has stimulated exploration for oil and bituminous products in Salt Lake basin. Gas occurs at several points along the east shore of Great Salt Lake in the vicinity of Farmington; oil is reported from Skull Valley, south-west of the Oquirrh Range, and asphalt is being prospected on the north shore of Great Salt Lake south of Rozel Hills. Ground has been extensively located in each of these localities, and several companies have been organised to explore for oil and asphalt. One company, controlled and operated by the Guffey and Galey Co., of Pittsburg, has been actively engaged in boring for about a year, one is now boring, another has sunk several test borings in asphalt, another has contracted with professional drillers to sink three wells to 4,000 feet if necessary, and others have been chiefly engaged in securing properties awaiting developments.

The writer visited the only property where exploration was actually in progress, and also some two years ago the oil and asphalt prospects at Rozel Hills. This work was of a reconnaissance character, and it was not possible during these brief visits to make a complete study of the geologic problems involved.

The region which is being prospected for oil and asphalt lies in the north-western part of Utah, along the eastern and northern shores of Great Salt Lake, from 10 to 60 miles north-west of Salt Lake City. The areas are situated in the extreme eastern part of the great basin, and comprise a portion of the bed of Lake Bonneville. Solution of the practical geologic problems which are met in the exploration of these areas thus involves an understanding of the geologic history recorded by these two great features.

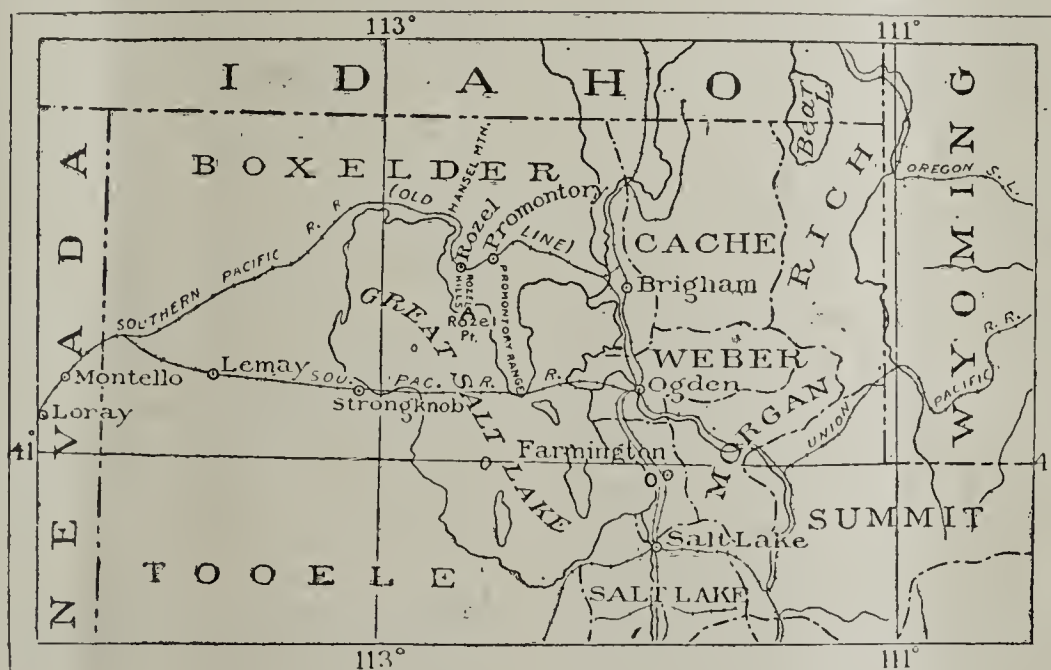
The great basin is, broadly viewed, a vast plain walled in by the massive Sierra Nevada on the west and by the lofty Wasatch Range on the east, and is interrupted by numerous linear north-south mountain ranges. The portions of these basin ranges now visible are in many cases only the crests of once lofty ranges which are now buried to unproved depths under waste deposits. At a comparatively recent date a depression on the extreme eastern side of the basin was occupied by an inland sea which washed the slopes of the Wasatch wall and extended westward into the present State of Nevada, southward to cover the present Escalante Desert in Iron county, northward in Idaho, encompassed several of the basin ranges, making them islands, and overflowed through Red Rock Pass into the Snake River system. Its extent and history are recorded by the prominent shore lines which characterise the slopes of elevations throughout this area. Waste from the surmounting land masses passed into this lake, covered the submerged

mountain slopes and intermontane rock bottoms, and accumulated thereon to a depth of many hundred feet. After draining to the lowest point of its outlet, the lake continued to shrink under the influence of evaporation, recording its fall during halting stages by well-marked shore lines, until it reached its present state—a comparatively small body in the lowest portion of the old basin. Thus a topography has been developed which is characterised by excessively flat stretches of desert interrupted by narrow, steep-sided, deeply dissected, north-south ranges, with their lower slopes contoured by shore lines.

The rocks composing the great Wasatch wall and the basin ranges include sandstones, limestones, and schists, which were considered by the geologist of the Fortieth Parallel Survey to range from Archean to later Tertiary in age. In the region bordering the area under discussion, the Wasatch section embraces rocks ranging from pre-Cambrian to Pliocene Tertiary, and the youngest

sedimentary rocks mapped in the neighbouring basin ranges are carboniferous.

The lake sediments forming the intervening stretches are clays, sands, and unconsolidated conglomerates, composed of material shed from adjoining slopes, and also carry interbedded plant and animal remains. The geological problem presented is, then, to ascertain whether



an oil-and-asphalt-bearing series occurs in these unconsolidated sedimentary fillings or in the underlying bed rock.

Prospecting for oil has been carried on at several points, and many hundred claims have been taken up along the eastern and northern shores of Great Salt Lake. Little oil has yet been encountered in this vicinity, though boring is still in progress at the Rozel Hills. About 150 miles farther south, at Fillmore, Utah, a small amount of boring is being continued with a view to tapping commercial quantities. It is understood that the lower portion of this boring, at the depth where oil was struck, was in bed rock.

The next deepest boring in the State has been put down by the Guffey and Galey Co. about a mile south-west of Farmington. A depth of about 2,000 feet has been attained, and the results of that work have been placed at the service of this survey.

Ground was selected by this company adjoining that from which gas was obtained for a limited time about 12 years ago for domestic use in Salt Lake City. It lies in a belt bordering Great Salt Lake, which has been exposed by the recent recession, and is characterised by low elliptical mounds of recent lake deposits of clay and sand, which are sometimes considered by oil experts to indicate the presence of oil. On a number of these

mounds, usually at their apices, are circular pits about 25 feet diameter, occupied by actively bubbling springs of cold water. An odourless gas escapes from the bursting bubbles, which ignites with a slight report, and for a brief period gives a pale light. No oil was observed in association with either this gas or the rising water. These springs were the guides to the gas which was formerly exploited, and together with the apparently significant topography led to the choice of location for the present exploration.

This well penetrates waterworn siliceous and calcareous sands and gravels, bearing occasional shells, fragments of wood, considerable hot water, and gas. It has reached a depth of about 2,000 feet, where a more solid formation, believed to be coarse boulders, was encountered. This interfered with further sinking by making the bore crooked, and thus led, in December, 1904, to the abandonment of the well.

At the early period when gas was exploited in the adjoining area it is reported to have diminished in amount after a time, and eventually to such an extent that the enterprise was abandoned. The reason assigned for the short life of the wells was their shallowness (500 to 700 feet), and it was held that great depths would afford not only permanent gas, but, in all likelihood, oil also. The present deep well partially disproves this assertion. "Blowouts" of gas and water were encountered at several points, notably at 20, 58, 158, 198, 325, and 390 feet, and several at greater depths. In some instances these were so forceful as to eject the casing. But, so far as known, no oil was found. The unconsolidated material cut by the boring is composed mainly of quartz, with some feldspar and mica, and the gravel shews that the chief source of this material was crystalline and metamorphic rock. The olive and greenish tints which characterise several of the beds penetrated is largely due to a mica of that colour which probably occurred in a metamorphic schist. Both the mica-schist and the crystalline rock were doubtless derived from formations which occur abundantly to-day along the western slope of the Wasatch, overlooking this basin area. Throughout the section fragments of wood, blackened and somewhat altered, were plentiful. The shells found at a depth of 500 feet beneath the present surface have been determined (April 15th, 1904) by Dr. W. H. Dall, paleontologist of the United States Geological Survey, to be *Valvata utahensis* and *Sphaerium striatinum*, and reported by him to be characteristic "freshwater shells living in still water and muddy bottom." This would seem to indicate that at the time these beds were deposited the waters of Lake Bonneville were fresh and possibly had not become an inclosed inland sea. The chief scientific value of this deep boring is to shew that the unconsolidated deposits are here at least 2,000 feet thick, and thus that the base of the great western fault scarp or front of the Wasatch Range and the bed-rock floor underlying the recent deposits in this basin are more than 2,000 feet below the present land surface. This boring proves that oil does not occur in the vicinity in the beds cut.

The only occurrence of asphalt known in this region is in the north-west part of Great Salt Lake, at the Rozel Hills. The nearest railway station is Rozel, 10 miles north, but the most convenient starting point is Promontory, on the Southern Pacific Railway. From that point in the Promontory range a drive of 15 miles south-westward across the intermontane desert known as Rozel Flats, brings one to the southern end of the Rozel Hills, at their descent to Salt Lake. The region

is topographically a portion of this desert, which extends westward athwart the course of the Rozel basin range.

The geology of the region is little known. The Promontory and Rozel ranges are made up mainly of well-bedded calcareous sediments, which have been deformed, folded, and broken. At the south end of the Promontory Range, along the route of the new Lucin cut-off, are steeply tilted schists and gneisses, which doubtless form the foundation for the sediments, while extensive masses of a basic extrusive cap the Rozel Hills and indicate a late eruption. The sedimentary beds, according to the geologists of the Fortieth Parallel Survey, are of carboniferous age, a conclusion reached by general correlation of the strata here with those of the Promontory range.

At the south end of the Rozel Hills the buff and grey limestones are much silicified and metamorphosed. They have been crumpled into a series of broad folds and much broken and brecciated. An extensive body of a basic extrusive with amygdaloidal structure forms the crest of the hills. This was believed by the observers of the Fortieth Parallel Survey to be "the same flow, now separated by the Quaternary deposits of the valleys," that outcrops to the north, on the Hanzel Mountains, and also to the west of the lake, on the hills next north of the Terrace range. It is quite possible that this extensive flow was effecting in metamorphosing the nearby limestones, and its ejection may be causatively related to the folding and brecciation of these beds. Whatever the cause, the significant fact remains that at the south end of the Rozel Range, in the immediate vicinity of occurrences of asphaltic matter, the limestone country rock is folded and brecciated and cut and capped by a basic extrusive.

The occurrence of this asphaltic substance appears, so far as is now known, to be restricted to the shallow littoral portion of Great Salt Lake, one-fourth to one mile out from the present shore line, immediately south-east of the Rozel Hills. It there exudes through the unconsolidated material on the bottom of the lake and bubbles up into the water in the form of hollow spherical or tubular masses one to two inches in length, and of threads and hairs six to 18 inches in length. These small masses spot the bottom in great numbers throughout this area. At certain points the emissions are concentrated into considerable seepages or "pitch springs," one to two feet in diameter. The source of these seepages appears to those who have prospected this ground to be a bed of asphalt two or three feet thick, which was encountered 80 feet below the present lake bed, and an underlying series of asphaltic beds three to five feet thick, which alternate with beds of clay to a depth of 140 feet, at least. In the vicinity of these seepages the asphaltic matter cements the calcareous oolitic deposits of the lake bottom into a bituminous limestone. This forms numerous low islets, 1 to 50 feet in diameter, which are distributed in rough alignment. This alignment and the presence of intensely brecciated zones in the limestone on the mainland suggest the possibility that the seepages may be along zones of fracture. These may have served merely to open exits for the fluid asphalt in unconsolidated lake beds, or may have also delivered it from deeper reservoirs in underlying bed rock into its present position. In brief, the asphalt occurs either in bituminous oolitic limestone, as the cement, or in springs, as liquid asphalt from beds 3 to 5 feet thick, intercalated with clay beds at a depth of 80 to 140 feet.

THE STORAGE OF PETROLEUM AND ITS DANGERS.

HOW THESE MAY BE MINIMISED.

A few days ago, Mr. James Sheppard, Chief Surveyor in London to the North British and Mercantile Insurance Co., delivered a very interesting lecture to the members of the Insurance Society of Cardiff, upon the subject of "Fire Risks." Speaking at the outset with regard to examples of the great increase of fire risks consequent upon the introduction of modern materials, he said the most striking was afforded by the use of petroleum and its products. Prior to 1886, all petroleum was imported in barrels, but since that time the importation of petroleum in barrels gradually decreased, and had now practically ceased. Numerous tank steamships, some having an enormous capacity (one as much as 3,000,000 gallons) are now in general use for the importation of petroleum, which is pumped from the tank ships direct into large tanks placed above ground in the neighbourhood of the wharves. These tanks have capacities varying up to 1,000,000 gallons. From these land tanks the petroleum is drawn off into tank barges, or tank railway cars, for the supply of smaller storage depôts, of which there are a great number distributed over the country. Petroleum is also filled into tank road waggons or into barrels of metal or wood for distribution to retailers and consumers.

Although this method of distribution may have in some directions reduced the fire risk always involved in handling petroleum, it has certainly introduced other hazards of a most alarming character, as shewn by the experience in America and on the Continent of Europe.

The need for care in regard to large petroleum stores is confirmed by the disaster at Hoboken, a suburb of Antwerp, on August 26th, 1904. Oil vapour and air, forming an explosive atmosphere, may have collected either inside, or, more probably, as the tank was full of oil, on the outside of the tank, in which latter position it would be retained by the enclosing walls. Smoking or the throwing down of a flaming match may have fired such explosive atmosphere surrounding the tank. Whatever the initial cause, fire immediately followed, involving the loss of eight lives and the destruction of a large amount of property.

To prevent outflow and avoid the accumulation of oil vapour round the tank, I suggest an arrangement of trenches, by which free circulation of air and consequent dispersion of all heavy vapour would be secured. For removing vapour from the tanks, pipes to act as syphons have been suggested, but I am unable to say if these are effective. If they are, some arrangement similar to that proposed for the dispersion of the heavy oil vapour would be a necessity. Earth banks or walls round petroleum tanks retain the dangerous vapour, accumulation of which cannot be avoided. Trenches only should be used to prevent outflow of oil, and the ground should gradually rise from the trench to the tank.

OPERATIONS OF THE ROUMANIAN REFINERIES IN MAY.

The following are the official figures relating to the operations of the Roumanian petroleum refineries in May.

The quantity of crude oil submitted to distillation at all the refineries in May amounted to 66,000 tons. The output of various products and the quantities delivered for home consumption were as follows:—

	Output.	Deliveries for Home Consumption.
	In tons.	In tons.
Benzine	29,061	41
Illuminating Oil	19,700	1,734
Lubricating Oil	5,294	667
Residuals	30,365	18,237
	84,420	20,679

The stocks of various products at the beginning and end of the month were:—

	30th April.	31st May.
	Tons.	Tons.
Benzine	20,348	16,705
Illuminating Oil	55,945	47,723
Lubricating Oils	10,415	14,852
Residuals	71,844	75,355

Total 158,552 155,635

Paraffin scale was produced in May as under:—
Deliveries for home consumption amounted to 8.7 tons, whilst the stock left on May 31st was 15 tons.

PETROLEUM CONCESSIONS IN INDIA.

AN INTERESTING RETURN.

A blue book that has a very interesting bearing upon the petroleum industry of India has recently been printed to the order of the House of Commons and is entitled a "Return of the Mineral Concessions Granted in India during the Years from 1889 to 1904," shewing the position and extent of these various areas, the names of the grantees and also the terms of grant.

Taking the concessions granted since the commencement of the present century—that is from 1901—it appears that in all there were 64 concessions granted for the exploitation of mineral oil, the periods varying from one to 30 years. Of this number four were taken out by the Burmah Oil Co. for areas amounting in the aggregate to a little over 14 square miles, and 28 different concessions were granted to Messrs. Finlay, Fleming and Co., the agents of the Burmah Oil Co. during the four years, these concessions in all covering an area of over 120 square miles in various districts in the Burma province. The greatest concession granted to Messrs. Finlay, Fleming and Co. has been for over 14,000 acres (roughly 22 square miles) in the Thayetmyo district in Burma, the royalty per annum being eight annas per 40 gallons of oil produced, while the surface rent was four annas per acre.

In looking through the publication to which we have referred, it is noticed that during the first year dealt with—1889—the second, third, fourth and fifth concessions granted were to the Burmah Oil Co., these principally being in the Magwe district. In one case the concession included the taking over of 66 State wells and the lands known as the Yenenkyet State reserve, and in another it was 164 State wells and several pieces of land adjacent thereto in the township of Yenangyaung.

THE AMERICAN PIPE LINE REPORT FOR JUNE.

The American pipe line report for the month of June shews that there was a decline in the runs of Pennsylvanian oil during the month, accompanied with a small increase in the shipments. The supply, however, was greater than the demand, and the net stocks increased over 3,300 barrels per day. While the runs of the Trenton Rock fields were the smallest recorded for recent years, there was likewise a decline in the shipments, the decline in the net stocks being about 1,900 barrels per day.

During the month the net stocks of Pennsylvania oil were increased 99,998 barrels, while the Buckeye stocks declined 58,105 barrels, making a net gain for the two fields combined of 41,893 barrels. This is the first time an increase has occurred since the latter part of 1904. During May there was a gain of 160,595 barrels in the net stocks of Pennsylvania oil, accompanied by a decrease of 300,478 barrels in the Buckeye stocks, and making the total decrease for the month 139,883 barrels.

The runs from the regions producing Pennsylvania oil averaged 74,841 barrels a day in June, which was a decline of 774 barrels from the May average. The daily average for May was 75,615 barrels, or 2,200 barrels above the average for April. For June, 1905, the runs of Pennsylvania oil averaged 81,843 barrels a day.

The total runs of Pennsylvania oil for the year 1905 were 28,043,987 barrels, or 76,833 barrels a day. These are the smallest receipts of high grade oil recorded in many years. The total receipts in 1904 were 30,316,329 barrels and in 1903, 30,652,554 barrels. The May runs were 2,042 barrels below the average of the preceding year.

The shipments of high grade oil during June averaged 71,227 barrels a day. This was 1,174 barrels less than the average for May. During May the shipments from the sections producing Pennsylvania oil averaged 70,053 barrels a day, or 1,226 barrels less than the average for April. For June a year ago, the shipments averaged 88,932 barrels.

The Buckeye Pipe Line Company's runs in the Trenton Rock oil fields averaged 39,320 barrels a day in June. This was 84 barrels less than the average for May. In addition the Buckeye pipe line received about 23,000 barrels a day from other sources, which arrested the decline in the stocks. The runs for May averaged 39,404 barrels, or 508 barrels less than in April. The runs for June, 1905, averaged 57,306 barrels a day.

The average daily runs of the Pennsylvania and Trenton Rock fields during the present year have been as under:—

	Pennsylvania.	Buckeye.	Total.
January ..	71,740	43,072	114,812
February ..	69,949	41,067	111,016
March ..	73,213	38,994	112,207
April ..	73,415	39,912	113,327
May ..	75,615	39,404	115,019
June ..	74,841	39,320	114,161

The average daily shipments have been:—

	Pennsylvania.	Buckeye.	Total.
January ..	76,589	64,044	140,631
February ..	74,471	67,480	141,951
March ..	70,642	70,589	141,331
April ..	71,279	74,885	146,164
May ..	70,053	70,200	140,253
June ..	71,227	63,094	134,321

JUNE DEVELOPMENTS IN THE TEXAS AND LOUISIANA FIELDS.

There were about 130 wells completed in the Gulf oil fields of Texas and Louisiana during June, of which 46 were destitute of oil in paying quantities. These are the figures, as summarised by the *Oil Investors' Journal*, a copy of which is just to hand. At the close of the month there were six rigs up and 97 wells drilling under way. In the Corsicana or light oil field in North-eastern Texas, four wells were completed and two of them were dry. The summary of wells completed, dry and abandoned for June is reported as follows:—

District.	Completed.	Dry.	Abandoned.
Humble, Tex. ..	96	36	11
Batson ..	6	1	3
Saratoga ..	2	0	0
Sour Lake ..	8	2	7
Spindle Top ..	3	1	0
Jennings, La ..	16	6	0
Total ..	131	46	21

Of the two producing wells completed in the old Spindle Top district, one was credited with 75 barrels and the other with 150 barrels a day. The Humble district shewed an increased production over May, but it is evident that it has passed the zenith of its productive powers, and henceforth is to become simply a pumping proposition. Most of the late wells completed range from 10 to 100 barrels capacity, and only one was credited with a yield of 300 barrels a day. On the last day of the month the gross production of the Humble pool was estimated at 14,000 barrels. The total yield for the month was 400,000 barrels, as against 360,000 barrels in May.

The Jennings field in Louisiana is also on the wane. Only ten productive wells were completed in June, and their average yield was quite small when compared with the performances of former gushers. The gross output of the district was 750,000 barrels in June, as against 860,000 barrels in May. On June 30th the field made 20,450 barrels, and on May 31st, 24,700 barrels.

The following is the same journal's report of the production of the Texas and Louisiana oil fields for June and May:—

District.	June.	May.
Jennings, La. ..	750,000	860,000
Humble, Tex. ..	400,000	360,000
Batson ..	210,000	211,000
Saratoga ..	240,000	245,000
Sour Lake ..	195,000	198,500
Spindle Top ..	84,000	91,000
Dayton ..	6,500	6,975
Hoskins Mound ..	40,000	14,000
Total ..	1,925,500	1,986,475
Daily average ..	64,183	64,080

It will be seen that the daily average yield for the two months is very nearly the same, but when the yield for the last day of the two months is compared, the decline was quite large. The production of the Gulf Coast fields was placed at 65,680 barrels on May 31st, and 60,560 barrels on June 30. This would represent a drop on the last of June of 5,120 barrels.

There has been no falling off in the consumption of the Gulf Coast oil, which was 2,939,690 barrels in June and 2,977,966 barrels in May. This was an average of 96,063 barrels a day in May and 97,989 barrels in June, a gain of 1,925 barrels a day. The excess of demand over supply is made up from the surplus stocks on hand, which have been steadily declining for several months past. This condition of affairs has brought about an advance in the market, and Spindle Top oil is now bringing 65 cents a barrel. Oil from the other districts ranges from 52 down to 38 cents a barrel.

PETROLEUM IMPORTS INTO GERMANY.

JUNE STATISTICS.

According to official statistics, the imports of petroleum products into Germany during June, compared with May, were as follows:—

	June. Tons.	May. Tons.
Illuminating Oil.. ..	29,025	39,413
Lubricating Oil	12,715	12,995
Crude Oil.. ..	2,262	2,618
Crude Benzine	8,564	9,391
Refined Benzine and Petroleum Ether.. ..	1,055	957
Artificial Turpentine and Other Mixtures	91	98
Residuals	29	14
Total	53,741	65,486

The imports of petroleum products from the different producing countries in June, compared with May, were as follows:—

	June. Tons.	May. Tons.
U.S.A.	29,410	42,317
Russia	6,358	8,784
Dutch India	6,981	7,129
Austria-Hungary	3,165	3,177
Roumania.. ..	3,123	2,069
Other Countries	4,704	2,010
	53,741	65,486

The quantities of various petroleum products exported from Germany during June were:—Lubricating oils, 1,042 tons; residuals, 263 tons; benzine, 632 tons; other products, 8 tons; in all, 1,945 tons.

THE STEAUA ROMANA AT THE ROUMANIAN JUBILEE EXHIBITION.

Unlike the companies of the Disconto-Bleichroeder group, the Steaua Romana has no pavilion of its own at the exhibition, but has placed its exhibits in the pavilion of Mines and Quarries of the Ministry of Domains. The opening of this exhibition took place quite recently with much ceremony in the presence of their Majesties the King and Queen of Roumania, accompanied by other members of the Royal family.

The King and Queen were attended by Messrs. G. Cantacuzene, the Prime Minister; Jean Lahovary, the Minister of Domains; and Dr. Istrati, Chief Commissioner for the Exhibition; and were received by Mr. G. Spies, General Manager of the Steaua Romana; Mr. G. Boamba, the Managing Director; and Mr. F. Pavelevscu, the engineer who has organised the company's exhibits.

Their Majesties inspected in detail all the articles exhibited, and took great interest in every item. The exhibit, it should be mentioned, is very successfully got up and conveys a complete and true idea of the petroleum industry from the technical and commercial point of view. There are views of wells in eruption, wells in flames, and panoramic views of the oil fields ingeniously displayed on the walls of the hall.

There is also exhibited a plan of the oil properties on a scale of 1:5,000. The geological section of the exhibit comprises specimens of the most typical tertiary formation, in which petroleum is found in Roumania, while a geological report by W. Pavelescu on the

structure of the petroliferous region of the Campina-Bustenari-Faget, where the producing oil fields of Roumania are mainly situated, has been specially prepared. This report is accompanied by a geological map of the whole of the Campina-Grausor-Bustenari-Faget oil region, on a scale of 1:10,000, and various transversal and longitudinal sections of the strata on the properties of the Steaua Romana in that region.

The boring section is represented by a model derrick reduced to one-tenth of the real size, of the Canadian system, manufactured at the company's workshops, together with complete sets of drilling, baling, and fishing appliances.

In the refinery section there are two glass cases full of samples of crude oils from various fields, and of the various products manufactured at the company's four refineries at Campina, Monteorn, Moinesti and Bucarest. There is also a plan of the Campina refinery and photographs of the distilling, refining and paraffin extraction plants in the Campina refinery.

There is a very interesting series of diagrams and statistical data on view dealing with the company's operations since its formation in 1895 up to the present time.

On the basis of these statistics the following interesting table has been compiled, giving the production, refining, exports and deliveries for home consumption by the company during the whole period of its existence:—

Year.	Production of Crude Oil. Tons.	Crude Oil Treated at the Refineries. Tons.
1895-6	—	15,430
1896-7	23,460	31,280
1897-8	53,330	49,460
1898-9	109,530	113,600
1899-1900	113,460	128,800
1900-1	102,290	103,650
1901-2	142,320	121,150
1902-3	132,390	148,090
1903-4	184,600	175,480
1904-5	209,780	185,760
1905-6	214,490	—

The following are the quantities of various products exported by the Steaua Romana since its formation (in tons):—

	Benzine.	Illumg. Oil.	Residuals.	Other Products.	Total.
1895-6	—	—	—	—	—
1896-7	—	—	—	20	20
1897-8	—	7,980	—	8,870	16,850
1898-9	1,360	24,250	440	6,550	32,600
1899-1900	4,940	18,870	5,140	19,360	48,310
1900-1	4,070	15,860	60	26,820	46,810
1901-2	6,750	17,230	160	18,480	42,620
1902-3	10,460	27,380	610	32,480	71,930
1903-4	17,600	38,590	1,400	57,680	115,270
1904-5	16,670	12,200	1,870	52,630	83,370
1905-6	16,710	47,700	1,410	32,850	98,670

The quantities of various products delivered for home consumption were (in tons):—

	Benzine.	Illumg. Oil.	Residuals.	Other Products.	Total.
1895-6	160	7,460	—	2,610	10,230
1896-7	390	13,570	2,120	3,420	19,500
1897-8	600	14,020	4,400	4,020	23,040
1898-9	370	16,700	16,130	2,300	35,500
1899-1900	500	9,750	26,710	2,650	39,610
1900-1	470	10,930	41,760	9,930	63,090
1901-2	540	10,890	31,630	16,580	59,640
1902-3	690	10,600	31,630	9,980	52,900
1903-4	610	9,120	41,340	7,060	58,130
1904-5	710	8,800	36,590	8,590	54,690
1905-6	710	6,070	—	55,100	61,880

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	11-13
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/9-3/3
Bibi-Eybat Petroleum Co. ..	£650,000 5½% Pref.	£1	5/6-6/0
Californian Oilfields ..	£250,000 Ord.	£1	5½-5½
European Petroleum ..	£550,000 Pref.	£1	2/0-3/0
"	£550,000 Ord.	£1	0/6-1/6
"	£376,000 Deb.	£100	84-87
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	9/0-10/0
Schibaieff Petroleum ..	£600,000 Ord.	£1	7/6 8/6
"	£575,000 6% Pref.	£5	6/0-7/0
"	£575,000 Ord.	£1	2½-2½
Shell Transport & Trading ..	£2,000,000	£1	27/0-28/0
Spies Petroleum Company ..	£1,000,000 Pref.	£10	9½-9½
	£312,500	10s.	7/0-7/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on July 30th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	572	575
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	3,875	3,925
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	142	145
Neft Co.	250	—	—
Nobel Bros.	5,000	8,550	8,650
"	250	425	—
Rops and Co., V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" (Second Issue)	250	—	—

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 2nd August, 1906, as follows:—

There has been rather more enquiry during the past week, but the trade continues depressed, and there is no change in prices, which remain at about the same level as last week, as below. In the Llanelly district a considerable amount of distress prevails owing to the large number of tin plate mills still idle:—

1c	18½×14	124 sheets	110 lbs.	12/9 to 13/0 per box
1c	19½×14	120 "	110 "	12/9 to 13/0 "
1c	20×10	225 "	156 "	18/0 to 18/3 "

F.o.b. Wales. Tin lining and iron hooping extra.

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8½ pd	£199,750	£10	17½
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Burmah Oil, Ord.	£1,100,000	£1	58s. od.
Do. Pref.	£250,000	£1	24s. 9d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8½
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	17½
Do. New (£8 10s. pd.)	£131,750	£10	17½
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	96s. 9d.
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	12½
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	32s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	66s. od.
Do. "B" Deb...	£150,000	£100	143½

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	—	80	1,000
Aurora " (Deb. 5%) ..	—	90½	—
Campina Poiana Mij. ..	39	35	—
Dordtsche Petroleum Mij. (Pref.) ..	119½	122	500
(Deb. 4½%) ..	102½	102½	1,000
Elzasser Petroleum Mij. ..	2	2½	1,000
Gaboes " ..	—	19½	—
Holl. Rumeensche Petroleum Mij. ..	34	26-28½	1,000
Int. Rum. Pet. Mij. ..	87	88½	500
Java Petroleum Mij. (Ord.) ..	—	30	1,000
(Pref.) ..	38	42½	—
Koninklyke Nederl. Pet. Mij. Shares	570	480-487	250-1,000
" Share certificates	570	478-482	1,000
Mœara Enim Petroleum Mij. ..	112½	114½-115	100
" 1-1,000 Oblig. 5	102	102	250-1,000
" Moesi Ilir " Petroleum Mij. ..	44½	34½	—
Nederl.-Rumeensche Petroleum Mij.	17½	17½	—
Nieuwe Ned. Petroleum Mij. And...	—	55½	1,000
Oliebronnen in Hannover Mij. ..	137	170	—
(Deb. 5%) ..	99½	100½	—
Panolan Maatschappij Cert. ..	355	340	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	135½	143½	1,000
(Common) ..	115½	97 x.d.	—
Sumatra-Palembang Petroleum Mij	71½	61	500
Zuid Perlak Petrol. Mij. (Pref.) ..	88½	84½	—

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended July 7th was 233,000 poods, or 3,756 tons; and for the week ended July 14th was 92,000 poods or 1,483 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended July 8th was 220,000 poods, or 3,547 tons; and for the week ended July 15th was 170,000 poods or 2,741 tons.

SPIES PETROLEUM Co., LTD.—The output for two days, viz., the 28th and 29th July, was 50,810 poods, or 819 tons, full baling being resumed on the 29th July.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended July 8th, 1906, was 69,994 poods, or 1,128 tons (production for four days only; work stopped by strike 6th July).

[No further details have reached us than the figures given above.—ED. "P.R."].

A SOUND INVESTMENT.

No better Investment could be possible for anyone desiring to become fully acquainted with the Petroleum Trade throughout the World, than the purchase of the Bound Volumes of the "Petroleum Review."

THE Oldest English Petroleum Journal.
THE Most Influential Journal.
THE Journal.

BORE HOLES FOR OIL

Contracted for by

JOHN M. THOM,

Canal Works,

Patricroft, MANCHESTER.

CONTRACTOR TO H.M. GOVERNMENT.

export trade by increasing the freight rates over the State railways from Baku to Batoum, we protested against the amateurish attempts recently made toward petroleum legislation in the British House of Commons, and also against the legislation in the Dutch Indies, and now we see the exceedingly dangerous suggestion that comes from the American Congress with reference to making pipe lines common carriers.

In no country more than in America has the petroleum industry made such remarkable progress during the past quarter of a century, and now that it occupies such a foremost position in commerce, it is no wonder that every oil producer, refiner, and pipe line company in the States is raising his hand against the present attempt at legislation with which he is so vitally concerned, for should the amendment agreed upon by the Congressional Committee become law, a most serious if not fatal blow will be struck at the American petroleum industry.

In the past we are all aware what dangers have been brought about by lack of unity among the people most concerned, but this does not to-day apply to our American cousins, for the gravity of the present situation has stirred up the whole of the oil regions from Pennsylvania to Kansas, and from Kansas to Pennsylvania, and united all those connected with the industry in an earnest effort to attempt to wreck this most useless and inexcusable piece of legislation—that of making America's pipe lines common carriers.

The reformer who agitates for State control of commercial schemes is always treading upon very thin ice, and this is especially applicable in this case, for there can be no doubt about it that the making of pipe lines common carriers would naturally mean that private enterprise would be killed, and in its place would come Governmental control. Up to the present private enterprise has been the life and soul of the American petroleum industry, and it is to this, and this alone, that it owes its now important position. A number of competing elements—some large, some small—have assiduously worked with the one aim and object in view of extending the oil trade of the American Continent and increasing its commercial importance, and that these various units have in their respective spheres been successful is seen to-day in the fact that the American petroleum industry stands upon a higher plane than at any previous time.

It is only reasonable to assume that once the pipe lines become common carriers there would immediately be a serious lull in the construction of these necessary adjuncts to the producing territories, for no one, we venture to think, would imagine it worth his while to boldly rush into an enormous expense in constructing a pipe line when legislation laid it emphatically down that this line should not carry the oil produced by the same body as those owning the pipe. We all know the history of the Batoum-Baku pipe line. About a quarter of a century ago, a scheme for a crude oil pipe line was proposed and supported by the Editor of this paper, and the Government decided that it was feasible to proceed with it, yet to-day the only pipe line yet laid—for refined oil only—is not in thorough working

order, nor is it likely to be for some time to come. Had America not had within it such a keen spirit of private enterprise as has been seen in the construction of the thousands of miles of pipe lines which are now in daily operation, its present position would have indeed been deplorable. Private enterprise, we repeat, has brought the American petroleum industry to its present high and important level, and there surely must be cause for alarm when legislation is suggested that directly aims at the destruction of this.

The underlying principle, however, in making pipe lines common carriers is decidedly bad. From the American Continent the world draws supplies of highest, as well as the lowest, grades of oil, ranging from 0.93 to 1.74 dollars per barrel, and how these various qualities would maintain their identity in transportation if pipe lines were common carriers we do not for one moment presume to argue. This objection, however, has been answered by a member of the American Congress as follows:—"This could be remedied easily by a matter of administrative detail compelling them to empty their line each time before accepting another consignment of oil"—a statement which we would add, indicates how slight a knowledge is possessed of this particular subject by those who would urge such destructive legislation.

The fact that the legislation prohibiting pipe lines from transporting oil produced or owned by them was favourably accepted by the American Congress because it was pointed out that the Standard would be the principal company to suffer, is in itself proof of the spirit of hostility and even of persecution that is rampant in America. But there are many other interests at stake, all of which would suffer if the suggested legislation became law, and it is possibly because unity exists among them all that there is some likelihood that this drastic and destructive piece of legislation may yet be nipped in time. The greatest misfortune that could ever overtake the American petroleum industry would be the destruction of private enterprise by making pipe lines common carriers.

LONDON OIL SHARE MARKET.

FRIDAY, AUGUST 3RD.

Although a welcome revival has set in on the Stock Exchange which has embraced several departments, the Oil Share section continues to be a weak spot; prices in some of the more prominent companies having declined to such an extent that it would appear as if bed rock figures must by now have been reached. During the earlier part of the period since we last wrote shares were practically unsaleable, even at the exceedingly low range of value quoted, but as we now write the tone is slightly stronger.

On Monday week Russians had a sharp relapse, but apart from this there were no further alterations until Saturday last, when Schibaieff Preference lost another $\frac{1}{4}$ at $2\frac{1}{4}$ - $2\frac{3}{4}$, but Spies improved $\frac{1}{32}$ at $\frac{5}{8}$ - $\frac{3}{8}$, and these shares were again in request on the following Monday, when the market was stronger.

To revert to the fortnightly carry over, which took place on the 25th ult., we can only report a list of depreciations in value since that of the mid-month. Anglo-Russians at $\frac{1}{16}$ lost 3d. per share, Baku Ordinary at 3s. were 1s., and the Preference at 6s., were 9d. lower, while Schibaieff Ordinary at $\frac{5}{8}$ fell 2s. 3d., and the Preference at $2\frac{3}{8}$ were $\frac{5}{8}$ down. Shell Transports lost 6d. at $1\frac{3}{8}$, Russian Ordinary 2s. at 8s., and the Preference 1s. at $\frac{1}{2}$, while Spies at 6s. were 6d. lower. Rates for Contango were easy, but there was practically no business to adjust.

THE STRIKE AT THE BAKU OIL FIELDS.

LATEST DETAILS.

The strikes at the Baku oil fields continue. Only a few Armenian and Tartar firms are working, the latter having promptly acceded to even the most extravagant demands of the men. It was thought wise to do this, as any cessation of work at a time when prices of crude oil were high and the supply short, might have involved them in serious difficulties. The strike of the workmen is, of course, of a purely economic character, and the demands now presented by the men constitute a breach of the agreement arrived after protracted negotiation which terminated the previous strike, and which was intended to eliminate all possibility of strikes on economic grounds. During the past few days there has been a tendency on the part of the men to restarting, but after a while they threw it up again without any apparent reason. The labour movement at present lacks in steadiness and is of a peaceful character, the majority of the men being inclined to restart work.

According to telegraphic reports, the producers have formed themselves into a union with the object of taking joint action in the face of these recurring strikes. It is quite possible that nothing will come of these proposals to lead to any real results, for the interests of the various firms in this respect do not harmonise by a long way. Whilst the small firms under the stress of necessity are compelled to promptly yield to all demands made by the men, the large firms are by their position bound to carefully weigh all steps they may take, for concession made to the men at the present period of high prices may prove ruinous to the industry, when prices will return to a normal level. Apart from this, all increase in the cost of production will increase the market price of the oil and accordingly restrict the market for the same, or at any rate prevent its extension.

SERIOUS OIL FIELD FIRE AT BUSTENARI.

Information is to hand recording one of the most disastrous oil fires that have occurred in the history of the Roumanian petroleum industry. On Friday last one of the wells of the Romano-Belgian Co., of Bustenari, took fire, which spread to the No. 99 well of the Steaua Romana, completely destroying both. Many work-people were killed and injured, and for some time a scene of wild panic reigned.

AN ALARMING RUMOUR.

It is rumoured that the Schibaieff Petroleum Co. is about to transfer the whole of its assets to the firm of Mazoot. If this rumour be correct, it is most unfortunate for the shareholders that the directors should dare to take such a step without consulting them in the matter. The time chosen for the disposal of the property is the worst that could have been selected, and we trust that the shareholders will take immediate steps to prevent such transaction.

RUSSIAN AND ROUMANIAN NOTES.

Messrs. G. Stefanescu and Co. have had their first spouting well at Campina. Another well of the same firm has just struck oil at Calinet. It is stated on good authority that Messrs. Stefanescu and Co. propose to carry out some important drilling work in the course of this year.

Baku-Batoum Pipe Line.—The through pipe line from Baku to Batoum is expected to come into operation about the 1/14th of August. The opening of the pipe line, which should have taken place earlier, was delayed by the breakdown of some machinery at one of the intermediary pumping stations. The new machinery ordered to replace it will be ready towards the end of July.

Petroleum on Lake Baikal.—Searches for petroleum on Lake Baikal are mainly concentrated on the north-eastern side of that lake on the Sviatoi Noss Peninsular. In one borehole sunk to a depth of 700 feet oil was discovered. In quality this oil resembles Pennsylvanian crude oil. It is doubtful whether any spouters will be struck there. This first well was sunk in a dry place. A second well was started on an isthmus covered with water.

Messrs. Merkulieff Bros., petroleum distributors in Russia, have, in 1905, earned a profit of 132,445 roubles, against 117,970 roubles earned in 1904. Out of the profit 51,561 roubles was written off for depreciation of property, 4,044 roubles for reserve fund, 11,411 roubles Government tax, and 65,420 roubles was distributed as dividend to the shareholders, making 817.75 roubles per share. For 1904 there was distributed as dividend 56,880 roubles, or 711 roubles per share.

The Russian Naphtha Co. has completed their financial year 1905 with a profit of 135,174 roubles, against a profit of 104,183 roubles earned in the preceding year. At the annual general meeting of shareholders it was resolved to distribute a dividend of 7.50 roubles per share on those issued as purchase consideration for the properties, and three roubles per share on the other shares, which have been paid to the extent of 40 per cent. of their nominal value. For the preceding year no dividend at all was declared.

Three Prospecting Wells drilled in the Bacau district in Moldavia have struck prolific oil strata. One of these wells belongs to the Italo-Romana Co., and struck an eruptive oil stratum at a depth of 760 metres. The yield of this well varies largely and cannot yet be accurately determined. The other two wells belong to the Romano-American Co. and are placed at Comanesti, one on the property of Mr. Dem. Ghica, and the other on peasant land. The striking of oil in these three wells is of great interest, as it proves that in Moldavia oil has to be looked for at about the same depths as in Galicia, where, it will be remembered, the most prolific oil strata are encountered between 1,000 and 1,200 metres.

MIS-QUOTED QUOTATIONS.

Our attention has been called to a criticism appearing in the last issue of the *Petroleum World*, which was presumably intended as a reply to the lengthy letter published in our issue of July 21st upon the report of the Russian Petroleum and Liquid Fuel Co., Ltd. In the garbled criticism in our contemporary we notice that a number of sentences have apparently been wilfully mis-quoted from the letter of our correspondent in order, no doubt, to discredit the whole criticism. If such mis-quotations were not wilful, then we regret that after delaying his journal for a few days the Editor of our contemporary should have taken such little care in accurately reproducing the several sentences of which we now complain.

THE CONDITION OF THE RUSSIAN EXPORT TRADE.

A SAD PLIGHT.

Last month the petroleum producers submitted to the Railway Department some data and figures regarding the railway rate question for export kerosene, and now the Railway Department is expected to shortly announce its decision. The figures submitted amply prove the sad state of the Russian export trade. The Eastern markets have been lost irretrievably in consequence of the stoppage of work at the Batoum case factories on the one hand and the development of the petroleum industry in the Dutch Indies on the other, while on the markets of Western Europe Russian petroleum is gradually losing its formerly important position in face of the competition. The revival of the export trade is a question of the greatest moment, not only from the commercial point, but also from a technical point of view, of the quality of the oil marketed in Russia.

In view of the events at Baku the tone of the petroleum markets in the interior of Russia have undergone a remarkable change. Sellers on receipt of the first news from Baku promptly broke off all negotiations for the sale of fuel oil, withdrew their offers, and stopped selling oil for future delivery, rightly fearing that they might find themselves compelled to restrict their shipping operations and thus violently upset any arrangement previously made. The price of residuals at Astrakhan has gone up 35-35½ copecs per pood, but even at this figure only small parcels are obtainable, and nobody will sell at all for delivery next month. Fuel oil for steamers is sold at a price of 37 copecs delivered at Astrakhan, and at other ports, according to distance. Residuals are sold, spot, at Czaritzan at 39 copecs, Saratoff, 40 copecs, and Nijni-Novgorod, 43-43½ copecs. At the same time large buyers are now coming on the market, having delayed making their contracts in the hope of a fall in price. There is therefore a great tension on all the markets, which will only be relaxed after the labour question at Baku has been settled.

Things are somewhat different in the kerosene trade, and having sufficient stocks on hand on the Volga, and foreseeing a possible increase of same by deliveries in the winter *via* Petrovsk, sellers are not against selling forward, and are coming with offers of varying nature,

some providing for sharing the risk between seller and buyer. The trade in kerosene is further stimulated by rather sharp competition among sellers.

In view of the fact that the refineries at Baku are working without any serious hitch, and there are considerable stocks ready for shipment, the shipping operations to Astrakhan are proceeding at a normal rate, although it is not sufficient to keep pace with the shipments from Astrakhan up the Volga, and the Volga barges have frequently to lie idle waiting for supplies from Baku.

THE BAKU OIL MARKET.

On the basis of deals made at the Baku Oil Exchange in June, the Exchange Committee has published the average prices for petroleum products, which were as follows :—

	Copecs per pood.					
Crude Oil	25-25½
Residuals	26½
Kerosene	24-28

In the first few days of July, under the influence of the workmen's strike, prices experienced a great change and went up enormously. Lately crude oil was sold at 29½-30 copecs, residuals at 32½ copecs, and kerosene at 30 copecs per pood, but owing to the uncertain state of the market there were no regular quotations on the Oil Exchange during the last week or so. It is impossible to gauge accurately the ultimate effect of the present strike on the market, but the fact alone that for over a fortnight the majority of the oil properties have been idle just at the time when the shipping season is in its full swing and the stocks have been exhausted, are giving prices a rapid upward tendency. The turnover on the market is very restricted, there are no large quantities of oil on offer, and the speculative element which usually operates with a view to taking advantage of one or the other tendency of the market, is now inactive, fully realising the great risks which the present undefined state of the market offers. Some contracts have, however, lately been concluded for a year's supply of crude oil at 21-21½ copecs per pood, the seller having also a share in any advance in price.

There can be no doubt now that the strike will result in a great reduction in the production, and therefore, any efforts made in the near future cannot serve to weaken the market. Prices are high, and for some time to come will remain high for all products, with the possible exception of kerosene, the price of which will increase only after a resumption of the export trade on a normal scale.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO JULY 30th, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since July 16.	From Jan. 1.	Since July 16.	From Jan. 1.	Since July 16.	From Jan. 1.	Since July 16.	From Jan. 1.	Since July 16.	From Jan. 1.	Since July 16.	From Jan. 1.	Since July 16.	From Jan. 1.	Since July 16.	From Jan. 1.
Austria ...	—	876,640	—	358,770	—	71,930	—	—	—	—	—	—	—	—	—	1,318,340
Belgium ...	—	370	26,770	284,590	—	11,000	—	—	—	5,300	—	—	—	2,486	26,770	292,746
Borneo ...	—	210	—	—	—	—	—	—	—	4,488,050	—	240	—	—	—	4,488,500
Canada ...	—	—	4,800	12,800	—	32,400	—	—	—	—	—	—	—	—	4,800	45,200
Germany ...	2,440	2,925,790	26,630	863,490	—	—	—	—	—	2,380	—	—	—	6,290	29,070	3,808,430
Holland ...	—	9,740	440	1,600	—	—	—	—	16,800	1,121,710	—	271,000	4,160	45,040	21,400	1,448,610
Roumania ...	—	2,563,175	—	—	—	—	—	1,035,880	—	591,980	—	—	—	—	—	4,191,035
Russia ...	2,138,370	21,406,570	5,400	2,532,140	—	—	—	1,604,250	—	5,050	—	—	—	5,660	2,143,770	25,553,670
Sumatra, &c	—	—	—	—	—	—	—	—	—	976,500	—	—	—	—	—	976,500
U.S.A. ...	1,041,340	56,195,397	854,620	25,213,004	—	533,553	437,700	25,933,240	1,249,820	6,840,960	—	9,047,730	6,000	1,063,240	3,589,480	124,817,034
Other Countries	—	1,370	1,360	24,110	—	—	—	—	—	480	—	—	—	213,400	1,360	239,360
	3,182,150	83,979,262	920,020	29,290,504	—	648,883	437,700	28,573,370	1,266,620	14,032,410	—	9,318,970	10,160	1,336,116	5,816,650	167,179,425

MISCELLANEA.

THE FLASH POINT OF RUSSIAN OIL.

A resolution of the Russian Council of State, which has already received Imperial sanction, has now been promulgated, the effect of which is to permit all petroleum oils giving off inflammable vapours at a temperature not below 21° C, by Abel-Pensky test, to be exported as illuminating oil. The Minister of Industry and Commerce is further instructed to carefully consider the question of lowering the standard of flash point of petroleum oils destined for consumption in Russia, and to submit the result of his labours for legislation in the usual course.

BAKU PRODUCTION DURING JUNE.

The total production of crude oil at the Baku oil fields in June, amounted to 38,164,000 poods, of which Bebe-Aibat contributed 10,022,228 poods. The total production by spouters was 234,900 poods.

The production of the principal firms at the oil fields during the month was as under:—

	Poods.
Nobel Bros.	5,000,000
Caspian and Black Sea Society	3,000,000
Caspian Society	2,100,000
Baku Naphtha Co.	2,100,000
Moscow-Caucasian Co.	2,000,000
Mantacheff and Co.	1,800,000
Zoubaloff	1,200,000
Mirzoeff Bros.	1,200,000
Russian Naphtha Co.	1,100,000
Pitoeff and Co.	1,000,000
Russian Petroleum and Liq. Fuel Co., Ltd.	1,000,000
Baku Russian Petroleum Co., Ltd.	900,000
Assadulaeff	900,000
Naftalan Co.	700,000
Schibaieff and Co.	600,000
Tumaieff and Co.	600,000
Nagieff	600,000
Ter Akopoff Co.	500,000
Shikhovo Co.	400,000
Tiflis Co.	400,000
Ogulevitch	400,000
European Petroleum Co., Ltd.	300,000
Bibi-Eybat Petroleum Co., Ltd.	200,000

THE PETROLEUM SITUATION IN INHAMBANE

Mr. Vice-Consul B. Horsfall, writing from Inhambane, says:—For many years past oil has been believed to exist around Inhambane, but it is only quite recently that any serious efforts have been made to ascertain the extent of the alleged oil fields. Prospecting operations have discovered indications of oil-bearing soil in the vicinity of Inhambane and at Nhangella, and borings are now being made with a view to ascertaining whether oil exists in paying quantities. In one instance a borehole was driven to a depth of 600 feet, and indications were so favourable that a scheme is now under consideration for an amalgamation of the various interests at Nhangella, with the object of commencing boring operations next year on an extensive scale.

The Government has rendered valuable assistance to claim-holders by granting a six months' suspension of

all mining dues. For some time past the construction of a railway to connect Inhambane with the Lourenco Marques-Pretoria line has been under consideration, and in the event of successful developments in the oil industry, the proposed railway would in all probability become an accomplished fact.

STARTLING PROPOSAL TO THE RUSSIAN GOVERNMENT.

A group of Baku petroleum producers, with Mr. P. O. Gukasoff at the head, have made a proposal to the Russian Government, the effect of which would be to give the Transcaucasian State Railway a share in the profits of the petroleum refiners on their export trade in Russian kerosene. The railway would undertake to carry the kerosene from Baku to Batoum free of charge, and in return the gross receipts realised by the exporting firms by the sale of their kerosene abroad would be divided between the exporters and the railway in certain proportions.

PRODUCTION IN GALICIA IN MAY.

The production of crude oil in the Galician oil fields in May are given in the following table (in tons):—

	Production.	Deliveries.	Stocks on 31st May.
West Galicia—			
Potok	1,310	924	6,424
Rogi	1,152	1,918	10,518
Rowne	191	138	289
Tarnawa-Wielopole-Zagorz	1,528	2,660	4,043
Krosno	4,919	6,305	15,090
Other fields	2,900	1,992	10,493
East Galicia—			
Boryslaw-Tustanowice	45,360	62,465	384,793
Schodnica	4,270	1,774	55,018
Urycz	1,270	1,643	15,540
Mraznica	120	204	1,557
Other fields	960	840	240
Total	63,980	80,863	437,148

The quantity of crude oil lost or used as fuel at the wells in May was 2,345 tons, of which 1,600 tons were at Boryslaw-Tustanowice.

The stocks of crude at all the fields during the month declined by 23,131 tons, and the stocks at the Boryslaw-Tustanowice field taken separately shew a decline of 20,706 tons.

BATOU PETROLEUM SHIPMENTS.

The following are the shipments of petroleum products from Batoum for the week ended July 8th (o.s.):—

	Illuminating oil.		Other products.	
	1905.	1906.	1905.	1906.
To Europe	672,000	701,000	446,000	290,000
To the East	223,000	131,000	—	—
To Russian Ports	—	231,000	2,000	15,000
From Jan. 1st to July 8th:—				
To Europe	11,630,000	7,891,000	5,106,000	4,261,000
To the East	7,636,000	2,492,000	296,000	32,000
To Russian Ports	1,849,000	1,700,000	105,000	130,000

THE MOESI-ILIR PETROLEUM COMPANY.

THE PAST YEAR'S OPERATIONS.

We have received a copy of the report of the Moesi-Ilir Petroleum Co. operating in Sumatra for 1905. The output of crude oil at the plots worked by the company month by month was as under:—

	Pangadang. Tons.	Belani. Tons.
January	883	289
February	686	175
March	626	140
April	615	205
May	778	124
June	919	134
July	1,215	309
August	1,186	232
September	1,254	287
October	1,063	266
November	1,004	120
December	1,120	120
Total	11,349	2,401

The production at Pangadang shews a decrease of 6,354 tons against 1904. In order to obtain fresh production the company has carried out a considerable



A GROUP OF SPOUTING WELLS.

amount of drilling during the past year. For instance, at Pangadang 2,658 metres have been drilled, and at Belani 2,623 metres, making in all 5,281 metres. The results of the drilling were varying, and on the whole not very satisfactory.

The company's refinery worked satisfactorily during the year. Of the company's own crude oil 12,875 tons were treated. The quantities of products obtained, exclusive of oil used as fuel or lost at the refinery were:—7,203 tons of Standard white kerosene, 653 tons of light benzine, and 3,488 tons of residuals. Of the latter, part was used for the manufacture of lubricating oils.

The shipments of petroleum products in 1905 were: 7,609 tons of Standard white kerosene, 153 tons of kerosene of second quality, 587 tons of benzine, and

2,471 tons of fuel oil. The shipments of lubricating oils in cases amounted to 21,802 gallons. The stocks left at the end of the year were: Kerosene, 1,278 tons; benzine, 478 tons; lubricating residuals, 1,602 tons; and fuel oil, 214 tons.

Under the contract which the company has with the Nederlandsch-Indische Industrie en Handel Maatschappij, there were also treated at the refinery during 1905 29,562 tons of Borneo crude oil.

The financial results for the year are rather unsatisfactory, shewing a loss of 208,357 florins. The sum realised by the sale of products amounted to 333,156 florins; the cost of exploitation was 437,287 florins; royalty, 19,424 florins; and depreciation, 28,530 florins.

The nominal capital of the company is 9,600,000 florins, out of which only half has been issued. The concessions figure in the balance sheet at 1,322,225 florins; refinery, 1,302,440 florins; Pangadang pipe line, 822,400 florins; Belani pipe line, 110,100 florins; machinery and appliances, 323,600 florins; capital expenditure at Pangadang, 214,700 florins; at Belani, 140,300 florins.

THE ROUMANIAN PETROLEUM ASSOCIATION.

As a result of the re-organisation of the Roumanian Producers' Association, the duties of the secretary of the association have been greatly increased, and it has now become necessary for the association to have a paid secretary. Mr. N. Mancas, being unable to accept a paid post and give the necessary time for the increased sectorial duties, has resigned his position, whilst offering to continue to use his best endeavours to further the interests of the association. Mr. I. Tanasescu, Chief Mining Government Engineer for the Ploesti district, has been unanimously elected to the post.

ANNUAL MEETING OF "OLEX."

The second general meeting of the Aktiengesellschaft für Österreichische und Ungarische Mineralölprodukte was held on the 18th ult., under the presidency of Mr. David Fanto.

The report shewed a considerable increase of the petroleum export trade in proportion to the year before, and also the most favourable expectations for the present year. The directors proposed a distribution of a dividend of 6 per cent. for the past year, which was unanimously accepted. The vice-president of the company, Mr. Ludwig Neurath, and a member of the board of directors, Mr. Marcell Schreier, retired, and Mr. Gustav Reichel, sub-manager of the Ostrauer Mineralöl-Raffinerie, Max Boehm and Co., Vienna, and Mr. Ignatz Gartenberg, partner of the firm of Gartenberg and Schreier, in Jaslo, were elected new members of the board.

The Caspian Society.—The profit of the Caspian Society for 1905, its nineteenth financial year, amounted to 1,073,942 roubles. At the annual meeting of shareholders it was resolved to distribute a sum of 375,000 roubles as a dividend of 150 roubles per share, or 15 per cent. For 1904 the company's profits amounted to 1,505,633 roubles and the dividend paid to the shareholders was 300 roubles per share, or 30 per cent.

THE PRODUCTION OF THE AMERICAN FIELDS IN 1905.

COMPLETE DETAILS.

The complete details of the production of petroleum in the American fields during 1905 are now to hand, and will be found of great interest, inasmuch as the general question is treated in a most comprehensive manner, while in every case the results achieved are placed alongside those for the previous year. The progress made, therefore, from the point of view of production, can be seen at a glance, as also can the retrograde movement which has set in with regard to the yield of the light grade oils.

While there was a general decline in the production of the Pennsylvania and Trenton Rock oil fields during 1905, the new fields in the western part of the United States made heavy gains, so that the net result is a large increase over that of 1904. While in 1893 nearly 94 per cent. of the total oil production of the country came from five States east of the Mississippi river, now by far the greater bulk of the yield is produced in Texas, California, Kansas and Oklahoma. The aggregate production for the year is the largest ever known in the history of the oil industry. From a total yield of 500,000 barrels in 1860, the output of crude petroleum in 45 years has increased over 2,800 per cent. The output for the year under consideration is 2,800 times the yield for the year following the discovery of Colonel E. L. Drake.

The total production of the United States, which includes all grades of oil for 1905, is placed at 140,635,136 barrels. This is a gain over 1904 of more than 21,000,000 barrels, and represents a daily average yield of 385,300 barrels. Of this amount a little more than 52,000,000 barrels, or about 37 per cent., were credited to the fields east of the Mississippi. California ranks as the first oil producing State of the Union, with Texas second, Ohio third, West Virginia fourth, Indiana fifth and Pennsylvania sixth. The Mid-Continent oil fields yielded more oil than West Virginia, Indiana, Pennsylvania or Louisiana, but the production must now be credited to two State divisions.

The oils produced east of the Mississippi river are employed almost entirely in the manufacture of the higher products of crude petroleum; Kansas oil is likewise used to a considerable extent for refining purposes, but by far the larger percentage of the oil produced west of the Mississippi river is employed exclusively for fuel purposes.

Oil of the highest grade, which is classified under the general term of Pennsylvania oil, is found in various districts scattered through Southern New York, Western Pennsylvania, Northern West Virginia and South-eastern Ohio. It has a paraffin base, and is found in sandstone rocks at various depths, and was the first oil revealed to the commercial world by Colonel Drake's discovery in 1859. The output of this class of oil has reached as high as 35,000,000 barrels in a single year. Of late the yield has shewn a steady decline, and no amount of drilling has been able to increase the supply.

The production of the different States is exhibited by the receipts or runs of the various pipe line companies, but unfortunately all the lines do not publish their reports, so that in arriving at the total yield it is necessary to make an estimate of the receipts by the smaller lines. But the runs not reported are comparatively small, so that there is no possibility of any

grave errors resulting from this manner of arriving at the total yield. Taking the pipe line runs as a basis, the production of the oil producing States of the East for the past two years was as follows:—

	1905.	1904.
New York and Pennsylvania ..	11,402,515	11,999,055
West Virginia	11,569,020	12,754,008
South-Eastern Ohio	5,202,115	5,712,042
Kentucky and Tennessee..	1,210,821	1,015,068
Total	29,384,471	31,480,170

This represents a decrease during the past year of 2,095,699 barrels, or over 6 per cent. For several years previous, the production of high grade oil had been maintained at very nearly constant figures. It will be noted that Kentucky is the only State of the Eastern group that shewed an increased yield in 1905. The greatest decline was recorded in the oil districts of West Virginia, where a drop of 1,174,984 barrels was recorded. In Pennsylvania the decline was 596,540, and in South-eastern Ohio 195,753 barrels. The gain in Kentucky and Tennessee was 197,753 barrels.

In the Trenton Rock oil fields of North-western Ohio and Indiana there was likewise a heavy decline in the production. This oil, commonly known as Lima oil, is inferior to the Pennsylvania product, and contains a small amount of sulphur. Following is the production of Lima oil for the past two years:—

	1905.	1904.
North-western Ohio	11,430,597	13,350,508
Indiana	11,005,921	11,315,000
Total	22,436,518	24,665,508

This represents a decline of 2,228,990 barrels from the previous year, or less than ten per cent. It will be noted too that Indiana's production is approaching very closely that of the Buckeye fields of North-western Ohio. The difference in the output for 1905 was only 424,676 barrels, while in 1904 there was a difference of over 2,000,000 barrels. Illinois has also come into prominence the past year, as an oil producing State, but owing to the absence of pipe line facilities, the production for 1905 was comparatively small, and did not figure as an important factor in the supply of crude petroleum. Its production for 1905 did not exceed 200,000 barrels.

Counting the production of the sections this side of the Mississippi river, the past two years compare as follows:—

Grade of Oil.	1905.	1904.
Pennsylvania	29,784,471	31,480,170
Lima-Indiana	22,436,518	24,665,508
Total	52,220,989	56,145,678

This represents a decline in the yield of the Eastern oil fields during 1905 of 3,924,689 barrels. For ten years previous the production of the New York, Pennsylvania, West Virginia, Ohio and Indiana oil fields has been close to 55,000,000 barrels a year. It will be seen from the above table that conditions have changed, and unless the unexpected happens the production of these older sections will have a lower range for several years to come. Illinois, however, has in prospect an extensive area of territory, and promises to more than make good the waning supply from the Trenton Rock oil fields of Ohio and Indiana.

In the Mid-Continent oil fields an enormous increase occurred in the daily production during 1905, which

more than offset the decline in the high grade oil fields of the East. The activity in the various districts was unprecedented, and the resources of the pipe lines were taxed to the utmost to care for the constantly increasing supply of oil. The pipe lines were rapidly extended and tankage erected sufficient to supply a gain in the stocks of 25,000 barrels a day. At the close of the year, the stocks in iron tanks amounted to 13,250,118 barrels. In the following table is given the monthly and daily average pipe line runs by the Prairie Oil and Gas Co. in the Kansas, Indian Territory and Oklahoma oil fields for 1904 and 1905:—

	1905.		1904.	
	Total.	Daily Average.	Total.	Daily Average.
January ..	793,648	25,601	282,309	9,107
February ..	564,432	20,158	313,566	10,813
March ..	695,908	22,449	338,274	10,912
April ..	549,339	18,311	348,791	11,627
May ..	784,229	25,298	383,515	12,371
June ..	715,397	23,847	355,740	11,858
July ..	1,091,000	35,193	508,996	16,419
August ..	1,212,912	39,126	548,276	17,686
September ..	1,203,362	40,112	531,611	17,720
October ..	1,380,208	44,523	600,737	19,379
November ..	1,355,012	45,167	640,076	21,336
December ..	1,509,325	48,688	751,146	24,231
Total ..	11,854,772	32,479	5,603,037	15,309

From the above table it will be seen that the pipe line runs from the Mid-Continent oil fields increased from 5,603,037 barrels in 1904 to 11,854,772 barrels in 1905. This was a gain of 6,251,735 barrels, or nearly 112 per cent. Counting receipts by local companies that do not appear in the above figures, the total production from the oil fields west of the Mississippi must have been close to 12,000,000 barrels during the year 1905. The daily average runs increased from 15,309 barrels in 1904 to 32,479 barrels in 1905.

As shewing the wonderful development during the year in the Mid-Continent oil fields, the following table is presented. It gives the wells drilled, new production, field operations, etc., by months, and is believed to be as accurate a compilation as could be made:—

1905.	Comp.	Prod.	Dry.	Gas.	Rigs.	Drilling.	Total
January ..	330	7,960	40	36	63	372	435
February ..	167	6,589	30	13	63	275	338
March ..	348	9,691	51	41	69	250	319
April ..	389	10,225	78	42	47	260	307
May ..	375	9,794	68	50	42	235	277
June ..	299	9,818	59	47	44	205	249
July ..	286	9,266	45	24	45	163	208
August ..	309	10,850	44	45	36	173	209
September ..	341	10,315	45	24	70	211	281
October ..	312	9,677	36	30	52	206	258
November ..	431	12,108	44	40	47	266	313
December ..	436	15,256	37	33	51	309	360
Total ..	4,023	*10,130	579	425	*52	*244	*296

* Average.

The records available for the preceding year shew that 737 more wells were completed in 1904 than in 1905, but they were of a much smaller calibre than those discovered the past year. In 1905 the trend of developments was southward and some very profitable oil territory was opened up in Indian Territory and Oklahoma. Of the 4,023 wells completed in 1905, 425 were dry holes and 579 gas wells, leaving 3,019 that were productive of oil in paying quantities. The dry holes and gas wells constituted 25 per cent. of the total number drilled in 1905.

The Gulf oil fields of Texas and Louisiana recorded another heavy increase in production during 1905. Louisiana jumped from 6,611,419 barrels in 1904 to 10,149,122 barrels in 1905, an increase of 3,537,703 barrels. At the same time the Texas oil fields increased from 22,241,413 barrels in 1904 to 30,423,253 barrels in 1905, a gain of 8,181,140 barrels. This represents an increase in both States of 11,719,453 barrels, or over 40 per cent. The output of the various districts in Texas

and Louisiana for 1905, as reported by the *Oil Investors' Journal*, was as follows:—

Districts.	Barrels.
Corsicana, light oil ..	311,576
Powell, heavy oil ..	132,859
Clay county (Henrietta) ..	101,661
Matagorda ..	68,200
Humble ..	18,066,428
Batson ..	3,790,629
Sour Lake ..	3,369,012
Spindle Top ..	1,600,379
Saratoga ..	2,922,215
Dayton ..	60,294
Anse-la-Butte, La. ..	13,000
Welsh, La. ..	11,300
Jennings, La. ..	10,127,822
Total ..	40,572,375

Of this amount, 536,096 barrels were the product of Northern Texas, while the combined output of the Texas-Louisiana Gulf Coast districts was 40,026,278 barrels. Of this amount over 18,000,000 barrels, or 45 per cent., came from the Humble oil field in Texas, and over 10,000,000 barrels, or 25 per cent., from the Jennings district in Louisiana. These fields doubtless reached the zenith of their productive powers in 1905, and henceforth it is simply a question of new discoveries to maintain an annual yield of 40,000,000 barrels. The oil is in great demand in the South-west for fuel purposes, and has displaced coal on many railroads, sugar plantations and various other manufacturing industries in our Southern and South-western States. It is also quite valuable for lubricating purposes and a large proportion of it is employed as a basis in the manufacture of artificial gas in our Northern States. The quantity of illuminating oil extracted from this product is small and inferior in quality, but it finds a ready market in the South and figures quite largely in the exports from Galveston to foreign countries. The demand for the production of the Gulf oil fields has been constantly increasing on account of the enormous supply and low prices, and since the first of the year the surplus stocks have been drawn upon in order to meet it. During 1905 there was an increase in the surplus of over 7,600,000 barrels. The gain was confined chiefly to the Jennings district in Louisiana. Since the first of the year these stocks have been largely drawn upon to meet the growing difference between the demand and supply of Texas low grade oils.

California in 1905, as in 1904, led all other States in the production of crude petroleum. California oil has an asphalt base, and is used almost entirely for fuel purposes. Along many parts of the Pacific coast it has displaced coal on the railroads and for manufacturing and heating purposes. Large quantities of the product are also shipped to the Hawaiian Islands, where it is coming into general use on the large sugar plantations.

The following table, shewing the production by districts for the past two years, was compiled by the California Petroleum Miners' Association:—

District.	1905.	1904.
Coalinga ..	8,869,000	5,114,000
Santa Maria and Lampoc ..	5,300,000	670,500
Kern River ..	14,000,000	17,500,000
Los Angeles ..	3,000,000	1,200,000
Sunset ..	400,000	400,000
Midway ..	5,000	910
McKittrick ..	720,000	1,875,925
Newhall and Ventura ..	500,000	663,100
Fullerton and Brea Canyon ..	1,750,000	147,500
Whittier and Puente ..	960,000	748,000
Summerland ..	75,000	120,000
Sargents ..	20,000	35,900
Half-moon Bay ..	2,000	1,000
Arroyo Grande ..	5,000	—
Total ..	35,671,000	28,476,025

The total production in 1902 was 13,973,500 barrels. This was nearly doubled in 1903, which was credited with a yield of 24,337,828 barrels. During the past two

years it has jumped from 28,476,025 barrels to 35,671,000 barrels, a gain of 7,194,975 barrels, or over 25 per cent. The production for 1905 was more than four times as great as in 1901.

In the following table will be found an approximate estimate of the production of the leading oil-producing States west of the Mississippi river for the past three years :—

	1905.	1904.	1903.
California	35,671,000	28,476,025	24,337,828
Texas	30,423,253	22,241,413	17,955,572
Louisiana	10,149,122	6,611,419	917,771
Kansas, Indian Terr., and Oklahoma ..	11,854,772	5,603,037	1,071,125
Colorado, East ..	500,000	501,763	483,925
Wyoming, etc. ..	15,000	14,000	11,960
Total	88,613,147	63,447,657	44,778,181

It will be seen that the production of this class of oil increased over 25,000,000 barrels in 1905, and was nearly double the amount produced in 1903. In a general way, it can be stated that while the production of the Eastern oil fields declined 4,323,589 barrels, or about seven per cent., in 1905, there was an increase in the yield of the section west of the Mississippi river of 25,165,490 barrels, or nearly 40 per cent.

A considerable portion of the Bradford oil field in Pennsylvania projects over into New York State, and the pipe line runs, as reported, include oil from both States. The oil found in New York is of the same quality and comes from the same formations that are found in the Keystone State. An estimate of the production of the two States embraces the runs by the different pipe line companies that publish monthly statements, and the receipts from various sources that are not included in these statements. Following are the figures for 1905 :—

National Transit Co.	4,988,760.53
South-west Pa., Pipe Line Co. ..	2,428,324.51
Tidewater Pipe Co.	1,721,689.17
Emery Pipe Line Co.	293,715.37
P. and R. Oil Co., Pennsylvania ..	909,482.98
Franklin P.L. Co. (heavy oil) ..	36,946.62
Receipts other sources	1,023,595.73
Total	11,401,514.91
Total 1904	11,999,055.54
Decrease	596,540.63

About 10 per cent. of the above amount came from New York and the balance was produced in Pennsylvania. In 1904 there was a decrease of about 500,000 barrels in the production of these two States, as compared with the figures of 1903.

The production of the West Virginia oil fields is run by two pipe lines and their receipts represent approximately the yield of the entire State. There is a small amount of lubricating oil produced at Petroleum and Volcano in the eastern portion of Ritchie county, which does not appear in the following table of pipe line runs for 1905 :—

Pipe Line.	Barrels.
Eureka Pipe Line Co.	11,074,759.19
Producers' and Refiners' Oil Co. ..	494,261.34
Total	11,569,020.53
Total 1904	12,754,005.01
Decrease	1,184,984.48

In the above no estimates are included of receipts by other companies, and the pipe line runs for 1905 are considered as the entire production of the State.

Ohio is the only State where two highly different grades of oil are produced. In the South-eastern portion the oil comes from the sand rock formations, common to the Pennsylvania fields, and the oil is classified as Pennsylvania oil. In the North-western portion the oil is found in a lime formation, and is impregnated with sulphur. It yields a lower percentage of illuminating oil and costs more to refine than the product of the Pennsylvania oil regions. The product

of the South-eastern portion of the State is known as Pennsylvania oil, while that of the North-western counties is called Lima, Trenton Rock or Buckeye oil.

In the following table an estimate of the production of the South-eastern portion of the State is presented :—

Pipe Line.	Barrels.
Buckeye Pipe Line Co. (Macksburg Division) ..	4,235,006.11
Producers' and Refiners' Oil Co.	637,038.43
Other receipts	330,070.00
Total	5,202,114.54
Total 1904	5,712,042.47
Decrease	509,927.93

The following table contains the production of Lima oil only :—

	Barrels.
Buckeye Pipe Line Co.	9,288,906.84
Other receipts	2,141,690.22
Total	11,430,597.06
Total 1904	13,350,508.00
Decrease	1,919,910.94

The total yield of the Ohio oil fields for 1905 was as follows :—

	Barrels.
South-Eastern Ohio	5,202,115
North-western (Lima oil)	11,430,597
Total	16,633,712
Total 1904	19,062,550
Decrease	2,428,838

The production of the Indiana oil fields for 1905 was made up as follows :—

Pipe Line.	Barrels.
Indiana Pipe Line Co.	9,566,966.96
Receipts other lines	1,438,954.30
Total	11,005,921.26
Total 1904	11,315,000.00
Decrease	310,078.74

The total runs by the Cumberland Pipe Line Co. in 1905 from the oil fields of Kentucky and Tennessee amounted to 1,210,821 barrels as against 985,068 barrels in 1904. Only a small portion of this amount is produced in Tennessee. There is a small production in the Eastern portion of Kentucky, which finds a limited market by railroad, and which is not accounted for in this statement. There has been a large amount of prospecting for oil in Kentucky, but as yet the State has not amounted to as much as a factor in the world's supply of crude petroleum. The year 1905 shews a gain of 196,753 barrels.

In the following table an estimate of the production of the principal oil producing States is given for the years 1905 and 1904 :—

	1905.	1904.
New York and Pennsylvania	11,402,515	11,999,055
West Virginia	11,569,020	12,754,005
Kentucky and Tennessee	1,210,821	1,015,068
Ohio	16,633,712	19,062,550
Indiana	11,005,921	11,315,000
Illinois, East	200,000	—
California	35,671,000	28,476,025
Texas	30,423,253	22,241,413
Louisiana	10,149,122	6,611,419
Kansas, Indian Territory and Oklahoma	11,854,772	5,603,037
Colorado	500,000	501,763
Wyoming, etc.	15,000	14,000
Total	140,635,136	119,593,335

This is an increase for the year 1905 of 21,041,801 barrels. In 1904 there was an increase over 1903 of 19,131,998 barrels.

Oil Strike at Comanesti.—Two wells started by the Romano-American Co. at Comanesti in the Bacau district has struck oil at a depth of 350 and 500 metres respectively.

AMERICAN NOTES

The Mid-Continent Fields.—At the end of June the daily output of the Mid-Continent fields was roughly about 84,000 barrels.

A Prosperous Company.—The Crowley Oil and Mineral Co. has recently paid its eleventh 10 per cent. dividend to stockholders, who have, therefore, since this time two years ago, received \$20,000 more than the capitalisation of the company.

Oil Fuel for San Francisco.—The *Pacific Oil Reporter* learns that oil fuel will be the exclusive fuel in the fire district of new San Francisco. In many instances the tanks used in the destroyed buildings will be installed in the new ones.

Illinois New Production.—The new production in the Illinois oil field during June was about 17,000 barrels. The new production for May was close upon 9,000 barrels, indicating an increase in June of approximately 8,000 barrels.

The Success of Liquid Fuel.—It is now reported that all the railroads running through Texas are to burn liquid fuel on their locomotives, for which purposes many contracts for tanks adjoining railway property are at present being placed.

Hawaii Oil Shipments.—The shipments of crude and refined oil from San Francisco to Hawaii during March of this year were as follows:—Crude, 16,000 barrels; benzine, 460 barrels; illuminating oils, 3,100 barrels; and lubricating oils, 560 barrels.

Mid-Continental Stocks.—On June 30 there was held in storage tanks in the Mid-Continent field more than 19,000,000 barrels of oil, and it must continue to be stored at the rate of a 35,000-barrel tank a day, or as near that amount as tanks can be completed to hold.

Mid-Month Figures.—The production of the Texas and Louisiana districts during the first half of July shew an all-round increase when compared with the figures for the preceding month, but with one exception, that of Humble, where the production has dropped down by one thousand barrels per day.

Deep Canadian Test Wells.—It is stated that two syndicates of capitalists have secured leases covering 6,000 acres of oil lands in Raleigh township, Kent county, Canada, with a view to drilling deep test wells for oil. The property upon which these tests will be commenced is in the neighbourhood of the old Gord gusher.

An Example to Russia.—At a recent meeting of the executive committee of the American railroads it was unanimously decided to reduce the rates on oil and its products from the Eastern oil fields and refineries to all points west of Chicago. This is in order to counteract the movement for the transport of oil by pipe line.

In the Kentucky Fields.—In the Kentucky petroleum fields there is now much activity being exhibited. During the past few weeks some large contracts for drilling in the Wayne and Wolfe fields have been made, and at the time our correspondent wrote, twelve new rigs had been erected in Wayne and eight in Wolfe fields during the preceding six days.

To Facilitate Pipe Line Construction.—A measure has recently passed the General Assembly of Louisiana giving to pipe line companies the same right to expropriate lands for a right of way of their lines as is granted to railroad companies. This measure is looked upon as very just in its principle giving the pipe line companies the facilities needed.

Late Illinois Developments.—Under date of July 23rd, a communication from Pittsburg states that in the Illinois fields development work has been retarded of late owing to the scarcity of water. Many of the wells past due in the sand have been delayed from that cause. By the bringing in of a well on the property of the Ohio Oil Co., in Hendersonville township, which is now doing 200 barrels daily, the field has been considerably extended.

June Exports.—The exports of petroleum for June, as will be seen from the next column, were distributed as follows:—Crude, 8,975,617 gallons; naphthas, 1,256,870 gallons; illuminating oils, 69,138,943 gallons; lubricating oil and paraffin, 10,231,919 gallons; residuum, 4,465,204 gallons. The total mineral oils shipped from New York was 45,945,171 gallons; Philadelphia, 40,900,528 gallons; Baltimore, 468,134 gallons; Boston, 78,279 gallons; Delaware, 977,239 gallons; Galveston, 5,699,112 gallons.

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR JUNE.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during June were as under:—

	1905. Quantities. Gallons.	1906. Quantities. Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	7,056,942	977,239
New York	—	3,250
Philadelphia	1,882,473	6,238,371
Galveston	1,431,654	1,756,757
Total	10,371,069	8,975,617
Total value for the month, 1905		\$524,070
" " " 1906		\$523,485
NAPHTHAS—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	38,006	—
New York	1,329,748	676,020
Philadelphia	1,007,290	580,760
Galveston	—	—
Total	2,375,044	1,256,780
Total value for the month, 1905		\$172,212
" " " 1906		\$154,365
ILLUMINATING—		
Baltimore	668	—
Boston and Charlestown	5,577	52,130
Delaware	43,771	—
New York	44,184,230	37,924,965
Philadelphia	35,327,502	29,526,959
Galveston	30	1,634,889
Total	79,561,775	69,138,943
Total value for the month, 1905		\$4,649,526
" " " 1906		\$4,671,412
LUBRICATING AND PARAFFIN—		
Baltimore	338,839	468,134
Boston and Charlestown	3,442	8,649
Delaware	—	—
New York	5,461,762	5,964,923
Philadelphia	1,465,396	2,770,355
Galveston	—	1,019,858
Total	7,269,439	10,231,919
Total value for the month, 1905		\$964,826
" " " 1906		\$1,363,785
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown	—	17,500
Delaware	—	—
New York	912,660	1,376,013
Philadelphia	1,318,214	1,784,083
Galveston	—	1,287,608
Total	2,230,874	4,465,204
Total value for the month, 1905		\$72,259
" " " 1906		\$140,654
TOTAL MINERAL OILS—		
Baltimore	339,507	468,134
Boston and Charlestown	9,019	78,279
Delaware	7,138,719	977,239
New York	51,888,400	45,945,171
Philadelphia	41,000,873	40,900,528
Galveston	1,431,684	5,669,112
Total	101,808,202	94,068,463
Total value for the month, 1905		\$6,382,891
" " " 1906		\$6,853,692

YOKOHAMA PETROLEUM IMPORTS.

The total quantity of petroleum imported into Yokohama during the month of May was 280,000 gallons, this representing a value of 79,800 yen. The quantity imported for the corresponding period of 1905 was 5,028,719 gallons, valued at 1,044,935 yen. The total imports of petroleum so far this year have been 4,947,419 gallons, this quantity being valued at 1,044,990 yen.

The American Oil Market.

New York, Week ended July 21st.

The reports from the fields in the Northern producing States during the past week have been of a most discouraging character, and indicate decreasing production of those fields, as the new wells shew only small additions, insufficient to make good the decrease in the production of the old wells, although efforts are constantly being made to increase the output and prolong the life of the old wells by shooting. As a rule the results of shooting are highly satisfactory for a time, but the production soon again decreases and goes on steadily until the supply is practically exhausted. Much new work is under way, and there are no indication of a cessation of activity in drilling operations, but there is little to encourage hope for better results. The amount of territory within defined limits is restricted, and to go far beyond those limits requires courage. There is, however, says the *Oil, Paint and Drug Reporter*, considerable experimental work going on, both to establish extensions and in the search for new pools, and to this class of operations the major part of the failures to find oil is credited. In the search beyond defined limits some good gas wells have been found and one which will prove more profitable to the owners than a large oil well. Again, much is heard among producers about the failure of the price to respond to the stronger position of the high grade oils, the contention being that the price should advance. In Illinois work is being prosecuted with considerable vigour, and the results are almost uniformly satisfactory, 300 and 400 barrel wells being common occurrences. In the mid-continent fields the production shews a decline, as do also the shipments, and the stocks continue to accumulate at a rapid rate. In Texas the conditions shew no change, the production slowly decreasing. There has been no further change in prices for Texas oil, but former quotations are firmly adhered to.

REFINED AND PRODUCTS.—The demand for refined for export has slackened off somewhat during the past week, but the engagements have amounted to 200,000 barrels, all for shipment in bulk. The situation in Russia is decidedly uncertain, and, while mail advices are to the effect that progress at Baku and Batoum is steady and all is quiet, the reports by cable to the press have been of a somewhat alarming character. It is not believed, however, that Russian oil will become an important factor in European competition for some time, and probably not before the close of the year.

The price for barreled oil has remained firm at 7.80c. for New York loading, and at 7.75c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are firm at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel.

Cases for export have been in fair request, and sales of about 250,000 are reported. The price of plain tops has been steady at 10.30c. Freight rates are firm.

Crude for export has been in light request, and sales of about 5,000 barrels are reported. Pennsylvania crude is quoted at 7.80c. in barrels.

Crude naphtha continues firm. For export, sales of about 5,000 barrels have been reported.

CLOSING QUOTATIONS.

CRUDE.		Week ended	
		July 14. 1906.	July 21. 1906.
National Tran, Certificates	per bbl.	\$1.64@1.65	\$1.64@1.65
Pennsylvania crude in bbls.	per gal.	7.75	7.75
Pennsylvania crude in bulk	.. ..	4.70	4.70
Residuum, bbls for export	.. ..	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		July 21. 1905.	July 21. 1906.
Tiona .. ..	.. ..	1.42	1.74
Pennsylvania .. ..	.. ..	1.27	1.64
North Lima .. ..	.. ..	0.86	0.98
South Lima .. ..	.. ..	0.81	0.93
Indiana .. ..	.. ..	0.81	0.93
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.26	1.37

REFINED—FOR EXPORT.

		Week ended	
		July 14. 1905.	July 21. 1906.
Cargo Lots for export..	per gal. ..	7.80	7.80
In bulk .. ..	.. ..	4.70	4.70
Philadelphia loading ..	.. ..	7.75	7.75

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		July 14. 1905.	July 21. 1906.
5,000 to 10,000 .. ..	.. ..	10.35	10.35
1,000 to 5,000 .. ..	.. ..	10.50	10.50

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		July 14. 1905.	July 21. 1906.
120 fire test, S.W. ..	per gal. ...	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13	13
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	12½@13½	12½@13½

NAPHTHA AND GASOLENE.

		Week ended	
		July 14. 1905.	July 21. 1906.
Naphtha, crude, car lots, 68 @ 72 deg.	.. ..	14.00	—
Gasolene 86 deg. .. ..	.. ..	22.00	22.00

PENNSYLVANIA OIL RUNS from July 13th to July 19th were:—July 13th, 79,643; July 14th and 15th, 116,797; July 16th, 42,670; July 17th, 74,255; July 18th, 84,226; July 19th, 86,780. For the month of June, 2,245,234.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—51,040; 94,787; 99,680; 49,032; 59,497; 75,800. For the month of June, 2,136,814.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended July 20th and from Jan. 1, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	215,900	6,278,300	6,691,100
Refined, cases	261,000	8,308,000	12,937,000
Crude, barrels and bulk ..	—	880,500	675,600
Crude, cases	—	227,000	152,000
Naphtha, barrels	—	240,300	347,000
Residuum, barrels	—	467,700	559,300
Lubricating, barrels	3,300	191,000	95,600
Total, barrels cde. eq. ..	457,302	13,256,408	15,238,107

CLEARANCES FOR THE WEEK.

During the week ended July 20th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	7,008,150	256,520,119	280,387,800
Crude	—	232,800	748,344
Naphtha	136,000	11,973,507	8,186,013
Residuum	—	1,000	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended July 20th ..	9,344,200
Total from New York, from Jan. 1, 1906 ..	342,942,972
Same period last year	375,198,746
Decrease	32,255,774
From United States, week ended July 20th ..	24,555,170
Total from United States, since Jan. 1, 1906 ..	648,331,337
Same period last year	693,605,944
Decrease	45,274,607

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The "Review" Shipping List.

AUGUST 2, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE.	Sables d'Olonne	La Pallice ..	L. July 30	HELIOS	Hamburg ..	Philadelphia	P. Dunnet Head, July 22
ALCHYMIST	Terneuse ..	Hamburg ..	Arr. July 29	HOTHAM	Antwerp	Hamburg ..	L. Swansea, July 29
AMERICAN	Honolulu ..	Del. Break..	L. Hilo, June 10	NEWTON	San Francisco	Shanghai and Hankow ..	L. July 12
APPALACHEE	—	—	At Yokohama, July 7	HOUSATONIC	—	—	Tr. on Lakes btr U.S. and Can.
APSCHERON	Batoum	Antwerp	Off Ushant, Aug. 1	IMPERIAL	—	—	Arr. Havre, July 30
ARAL	Tyne	Philadelphia	Arr. July 22	JOANNIS COUTZIS	Batoum	Calais	L. Las Palmas, July 25
ARAS	London	Blyth	Arr. July 30	J.B.AUG.KESSLER	Pulo Samboe	St.Cath'rine's Point	P. Scilly, Aug. 1
ARGYLL	Honolulu ..	San Francisco	L. Port Harford, July 13	JAMES BRAND....	Philadelphia	Dunkirk	P. Dover, July 29
ASTRAKHAN	Tyne	Philadelphia	Arr. July 25	KURA	Blyth	Batoum	P. Scilly, July 20
AUGUST KORFF..	Tyne	Philadelphia	Arr. July 31	LA CAMPINE	Antwerp	Philadelphia	Arr. July 25
AUREOLE	Batoum	Manchester	P. Sagres, July 29	LA FLANDRE	Ghent	New York ..	P. Prawle Pt., July 25
AZOV	—	—	Trading on W.C. of South Amca.	LA HESBAYE	Antwerp	Marseilles ..	P. Gibraltar, Aug. 1
BAKU STANDARD	Tyne	Philadelphia	L. July 17	LA MADALEINE..	Antwerp	Philadelphia	L. June 5
BALAKANI	Hull	Philadelphia	P. Dunnet Head, July 22	LA VIGUESA	Gijon	Philadelphia	P. Dunnet Head, July 26
BATOUM	Philadelphia	Manchester	P. Del. Break, July 17	LACKAWANNA ..	Tyne	Philadelphia	Arr. July 12
BAYONNE	Genoa	New York ..	Arr. July 31	LE COQ	Pauillac	Tyne	Arr. Constani'ple, May 5
BEACON LIGHT..	London	Penarth	Arr. July 27	LOUTSCH	Messina	Novorossisk	Arr. July 30
BEME	Rangoon....	Calcutta	L. July 26	LUCERNA	Bergen	Tyne	P. Dunnet Head, July 21
BLOOMFIELD	New York ..	Bombay	Arr. July 9	LUCIFER	Tyne	Philadelphia	Arr. July 28
BORJOM	Alexandria..	Constant'ple	Arr. July 23	LUCIGEN	Tyne	Philadelphia	L. July 25
BRILLIANT	Rotterdam ..	Philadelphia	Arr. July 29	LUCILINE	Philadelphia	Philadelphia	P. Dunnet Head, July 29
BROADMAYNE ..	Tyne	Philadelphia	Arr. Aug. 1	LUMEN	Tyne	Novorossisk	L. July 25
BULLMOUTH	Yokohama ..	—	L. July 22	LUX	Marseilles ..	—	Trading in Black Sea
BULYSESSES	Cardiff	Balekappan	P. Barry Island, July 11	MAKKAWEI....	—	—	Arr. July 28
BURGERMEISTER	Philadelphia	Oxelosund ..	P. Dunnet Head, July 31	MANHATTAN	Venice	Kustendje ..	P. Dunnet Head, July 28
PETERSEN	Alicante	Baltimore ..	Arr. July 27	MANNHEIM	Tyne	Philadelphia	Arr. July 21
CADAGUA	Shanghai ..	San Francisco	L. June 15	MARGARETHA ..	Kustendje ..	Genoa	L. July 31
CALCUTTA (Br.bq.)	Singapore ..	—	L. June 25	MEXICAN PRINCE	Liverpool ..	Porto Rico ..	L. July 14
CARDIUM	Philadelphia	Liverpool ..	Arr. July 12	MIRA	Muronan ..	Singapore ..	L. July 23
CAUCASIAN	and Cardiff	—	Trading on W.C. of South Amca.	MUREX	Singapore ..	—	D. Dunnet Hd., July 23
CHARLOIS	Antwerp	Philadelphia	Arr. July 28	NARRAGANSETT	Tyne	New York ..	Tr. in China Seas
CHESAPEAKE	Philadelphia	London	L. July 20	NERITE	—	—	L. July 28
CHESTER	Batoum	Antwerp	P. Gibraltar, July 29-30	NEW YORK	New York ..	Southampton	Arr. July 27
CIRCASIAN PRINCE	—	—	Trading on W.C. of South Amca.	OCEAN	Philadelphia	Amsterdam	Arr. July 18
CLAM	Balekappan	Samboe	Arr. July 11	ORANJE PRINCE	Tyne	Manzanillo ..	Arr. July 30
COWRIE	Cardiff	Batoum	P. Malta, July 30	ORIFLAMME	Philadelphia	Rouen	P. Cape Henry, July 8
CYMBELINE	Batoum	Antwerp	Arr. London, Aug. 1	OSCEOLA	Brunswick & Norfolk (Va.)	Rio Janeiro	Arr. July 19 & cd. s'me d'y Galveston & Vera Cruz
CZAR NICOLAI II.	Hamburg ..	Batoum	Cl. Constant'ple, July 22	OTTAWA	New York ..	Philadelphia	P. Const'ple, July 28
DAGHESTAN	Tyne	Batoum	L. July 27	OURAL	Tyne	Batoum	Tr. Sts. Settlements & China Seas
DAKOTAH	San Francisco	Hong Kong	Arr. July 25	PALEMBANG	—	—	Arr. Aug. 1
DELAWARE	Dublin	Philadelphia	Arr. July 31	PAULA	Lisbon	Philadelphia	L. July 30
DEUTSCHLAND ..	New York ..	Hamburg ..	Arr. July 27	PECTAN	Port Arthur (Texas)	—	Arr. July 20
DIAMANT	Philadelphia	Copenhagen.	P. Butt of Lewis, July 30	PENNOIL	Rotterdam and Tyne	Philadelphia	L. June 6, In Tyne, July 30
ELAX	Shanghai ..	—	L. July 30	PERLAK	Calcutta	Aroe Bay ..	L. Const'n'ple, July 30
ELISE MARIE	Hamburg ..	New York ..	L. Tyne, July 21	PHOEBUS	Hamburg ..	New York ..	Arr. July 16
ENERGIE	Philadelphia	Dantzic	L. July 26	PINNA	Kustendje ..	—	L. July 21
ERIVAN	Manchester	Philadelphia	Arr. July 18	POTOMAC	Plymouth ..	Tyne	Arr. July 24
EUPLECTELA	Hull	Tyne	Arr. July 15	PROMETHEUS ..	Rotterdam ..	New York ..	Arr. July 27
EXCELSIOR	New York ..	Flushing....	Arr. July 99	PRUDENTIA	Rouen	Hamburg ..	Arr. July 27
EZIO	—	—	Coasting Peru	RION	Belfast	Rotterdam ..	Arr. July 27
FRANCE MARIE ..	Philadelphia	Palma	P. Del. Break., June 23	ROCK LIGHT	Port Arthur (Texas)	Novorossisk	Off I. of W., Aug. 1
GEESTEMUNDE ..	New York ..	Swinemuude	L. July 25	ROSSIJA	Hamburg ..	New York ..	Arr. July 31
GENESSE	Tyne and Sunderland	New Orleans	P. Sand Key, July 18	ROTTERDAM (Now C. F. Tietgen)	Copenhagen	—	—
GEORGIAN PRINCE	Philadelphia	Dover	P. Del. Break, July 12				
GOLDMOUTH	Cardiff	Singapore ..	At Port Said, July 19				
GLT HEIL	Philadelphia	Havana	L. July 26				
HAINAUT (Dch.shp.)	Ibrail	Antwerp	L. Sulina, July 21				
HARRY WADSWORTH	Ibrail	Campana ..	P. June 22				

Vessel.	From.	For.	Latest Date and Position.
RUSSIAN PRINCE	Philadelphia	Havana	P. Del. Break., July 9
SALAHADJI	—	—	Tr. Sts. Settlem'ts & Java Seas
SEMINOLE	Calcutta	San Francisco	L. July 5
SILVERLIP	Samboe	Singapore ..	Arr. July 27
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Antwerp	Newport	Arr. July 12
SOPHIE	Portici	Novorossisk	L. July 25
SPONDILUS	Samboe	—	L. July 16
STANDARD	Stockholm ..	New York ..	Arr. July 29
STROMBUS	Cardiff	Singapore ..	L. July 30
SURAM	Tyne	Batoum	P. Dardanelles, July 27
SUWANEE	Kustendje ..	Barrow	L. Algiers, July 25
SVIET	Batoum	Odessa	L. June 1
TELENA	Soesoe	—	L. Singapore, July 26
TEREK	London	Batoum	P. Tarifa, July 23
TIFLIS	Antwerp	Batoum	P. Tarifa, July 27
TIOGA	Manchester	New Orleans	At Liverpool July 20
TONAWANDA	San Francisco	Shanghai ..	L. July 6
TROCAS	Balekappan	—	L. Singapore, July 20
TURBO	Philadelphia	Hamburg ..	Arr. July 31
TUSCARORA	San Francisco	Kurrachee & Bombay	L. July 4
TWINGONE	Rangoon	Madras	L. July 16
VEDRA	Batoum	Rotterdam	L. Algiers, July 23
VILLE DE DIEPPE	Dieppe	Havre	Arr. Apr 26, in pt., July 26
VILLE DE DOUAI	Hull	Ibrail	P. Dover, July 24
VOLUTE	Melbourne ..	Sydney	Arr. July 28
WEEHAWKEN	Thameshaven	Tyne	Arr. July 25
WILLKOMMEN ..	Tyne	Philadelphia	P. Dunnet Head, July 28
WINNEBAGO (late Kinsman)	San Francisco	Shanghai ..	At Woosung, July 21

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

August 3rd, 1906.

The price of refined petroleum has risen ¼d. per gallon all round, latest quotations being:—Russian and Roumanian, 6d.; American, 6½d.; Water White, 8d.

LUBRICATING OILS

are unchanged as follows:—

- American pale, £7 to £9 10s.
- American dark cylinder, from £7 2s. 6d.
- American filtered cylinder, from £11.
- Shellene, £5.
- No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine has been fluctuating slightly since our last report, and is now firm for Spot at 43s., September to December, 43s. 6d.

LIVERPOOL OIL MARKET.

August 2nd.

Refined oils are quiet, and sellers now quote 5½d. for Russian, Galician or Roumanian; and 6¾d. to 7½d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, August 2nd.

Refined, in cases, is firm at 10.30; Standard White, 7.60; Credit balances, 1.58c.

PHILADELPHIA, August 2nd.

Standard White is quoted at 7.55.

RUSSIA.

BAKU, July 29th.

The Baku oil market is very strong. The prices are: Light crude oil, spot, 30 copecs per pood; residuals in ships, spot, 31–31½ copecs, July–August, 30 copecs.

BELGIUM.

ANTWERP, July 25th.

The petroleum market is unchanged. Price of Standard White, spot, 19½ francs per 100 kilos.; August, 19⅝ francs, and four last months of the year 20 francs.

FRANCE.

PARIS, July 14th.

Illuminating oil is quoted in bulk, in whole tank waggons, 20.25 francs per hectolitre; spirit, 25.25 francs per hectolitre. Special white oil, 28.25 francs per hectolitre.

GERMANY.

HAMBURG, July 30th.

The kerosene market is firm. The price of American Standard White is 7.10 marks per 50 kilos.

ROUMANIA.

July 23rd.

Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs.	...	3.60–3.70
Refined oil, exclusive of taxes	...	9.00–
Motor benzine, including taxes	...	16.00–18.00
Benzine, doubly refined	...	24.00–25.00
Residuals in tank waggons, at refinery	...	3.00–
Paraffin	...	120.00–125.00
Lubricating Oils —		
Agricultural...	...	30–32
Prime	...	35–37
Extra	...	40–42
Royal	...	45–46
In barrels free on rail including octro tax of 12 fcs. per 100 kilo.		

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.00
Benzine, sp. gr. 0.710–0.715 ...	11.00–12.00
„ sp. gr. 0.720–0.725 ...	8.00– 9.00
„ sp. gr. 0.735–0.760 ...	6.00– 7.00

INDIA.

BOMBAY, July 13th.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	.. ..	Rs. 6 0 2
„ Chester, 125 deg.	.. ..	4 8 0
„ Monkey Brand, 125 deg.	.. ..	4 2 2
„ Bulk, 125 deg. (in local made tins) ..	..	3 10 0
„ „ 125 deg. (8 Imperial gallons)	..	3 0 0
„ "White Camelia" brand, 125 deg.	..	4 0 2

The Asiatic Petroleum Company, Limited.

Current rates are:—

Borneo oils, in tins, per pair	.. ..	3 2 0
Sumatra "Rising Sun," bulk, per unit	.. ..	3 0 0
„ „ tins, per pair	.. ..	3 10 0
Silverlight cases, per case	.. ..	4 8 2
Russian, "Anchor," cases	.. ..	4 14 0

Messrs. A. I. Mantacheff & Co.

Current rates for Russian Oil are:—

Ram Brand, cases, Rs. 4-4-0 nett, ex-Bombay godowns (small lots).
Ram Brand, cases, Rs. 4-3-6 nett, ex-Bombay godowns (big lots).
Ram Brands, tin, Rs. 3-12-0 nett, per pair, ex-Bombay godowns.
Ram Brand, bulk, Rs. 3-2-0, per 8 Imperial gallons, ex-Bombay godowns.

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for .
this Journal by . . .
the Custom House.*

FOR THE WEEK ENDED JULY 23RD, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	No. OF GALS.	PORT WHENCE.
July. LONDON—				
17	Fielder, Hickman and Co...	Lub.	28,400	New York
17	Anglo-American Oil Co. ..	"	59,760	"
18	" (Weehawken)	Naph.	1,034,770	"
18	T. H. Lee	Lub.Gr.	260	Hamburg
19	G. W. Sheldon and Co. ..	Lub.	290	Antwerp
19	A. Brown and Co.	"	4,000	Philadel.
19	G. and H. Green	"	720	New York
20	L. and India Dock Com. ..	L.Gr.	1,600	"
20	Bowring Petroleum Co. (Beacon Light)	Lamp	1,039,290	Port Arthur
21	J. Barber and Co.	L. Gr.	1,650	Hamburg
21	Consolidated Pet. Co. (Aras)	Lamp	1,324,680	Batoum
21	G. W. Sheldon and Co. ..	Lub.	600	Antwerp
21	"	"	410	New York
LIVERPOOL—				
17	Meade-King, Robinson & Co.	"	7,200	Baltimore
18	Pickford's, Ltd.	"	870	Hamburg
21	Geo. B. Taylor	"	30,720	New York
23	Evans, Sons, Leacher & Webb	"	480	"
23	W. B. Dick and Co.	"	17,050	"
BRISTOL—				
19	Pickfords	"	500	Hamburg
20	W. Smith and Co.	"	5,000	New York
20	H. R. James and Sons ..	"	3,400	"
HULL—				
17	Anglo-American Oil Co. ..	"	28,770	"
17	Wilsons and N.E. Railway Shipping Co.	Lub.	6,800	"
17	"	"	480	Hamburg
17	"	"	480	"
17	Consolidated Petroleum Co. (Balakani)	Gas	437,700	Philadel.
17	Hull & Netherlands S.S. Co.	Tar oil	2,000	Rotterdam
17	Wilsons and N.E. Railway Shipping Co.	Lub.	1,200	Antwerp
MANCHESTER—				
19	Liverpool Storage Co. ..	"	1,250	New York
20	Meade-King, Robinson & Co.	"	66,400	Philadel.
20	Geo. B. Taylor	"	58,400	Philadel.
23	C. H. Morton and Son ..	"	2,200	"
23	Crew, Levick and Co. ..	"	9,880	"
23	J. T. Fletcher and Co. ..	"	8,040	Antwerp
MIDDLESBRO'				
21	E. H. Harris and Co. ..	"	2,840	"
NEWCASTLE—				
17	W. Swanston and Sons ..	"	440	Amsterdam
17	Tyne-Tees S.S. Co.	"	6,920	Antwerp
19	"	"	300	Hamburg

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	No. OF GALLS.	PORT WHENCE.
July. SOUTHAMPTON—				
17	American Line	Lub.Gr.	2,200	New York
SWANSEA—				
19	Burgess and Co.	Lub.	1,000	"
GLASGOW—				
17	Anchor Line	"	50,960	"
18	"	M. Colza	1,000	"
LEITH—				
17	J. Cormack and Co.	Lub.	4,400	Riga
17	J. Currie and Co.	Lamp	260	Hamburg
19	"	Lub.	1,520	"
19	Henderson and McIntosh ..	"	25,800	Philadel.
BELFAST—				
17	J. C. Pinkerton and Co. ..	"	150	Hamburg
19	"	"	320	"
21	Consolidated Petroleum Co. (Rion)	Lamp	813,690	Batoum
CORK—				
19	Palgrave, Murphy and Co..	Lub.	940	Hamburg
Total for the Week ..			5,097,990	

FOR THE WEEK ENDED JULY 30TH, 1906—

LONDON—				
July.				
24	Fielder, Hickman and Co. ..	Lub.	2,400	New York
24	T. S. Harris and Co.	"	4,940	Philadel.
25	Scott's Wharf	"	4,400	New York
25	Anglo-American Oil Co. ..	"	24,160	"
26	"	"	51,000	Philadel.
26	Mordaunt Bros.	"	2,500	"
26	E. J. Wilkinshaw	"	10,000	"
27	J. Barber and Co.	"	1,200	Hamburg
28	J. Spurling	Lub Gr.	250	New York
28	J. Harrison, Ltd.	Lub.	1,360	Treport
30	W. Balchin	"	8,000	Philadel.
30	A. Brown and Co.	"	4,000	"
30	G. W. Sheldon and Co. ..	"	1,960	New York
30	T. H. Lee	"	2,470	Hamburg
LIVERPOOL—				
24	Liverpool Storage Co. ..	"	3,000	New York
26	T. Meadows and Co.	"	1,200	Philadel.
26	Worthington and Boler ..	"	5,800	"
26	Meade-King, Robinson & Co.	"	8,000	New York
27	"	"	5,040	Baltimore
27	"	"	19,600	Philadel.
27	W. B. Dick and Co.	"	8,400	"
27	Crew, Levick and Co. ..	"	9,920	"
27	George B. Taylor	"	13,600	"

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DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
July.				
27	A. Hopps and Sons Lub.	9,710	Philadel.
27	"	.. "	7,360	Baltimore
27	Vacuum Oil Co. ..	.. "	11,960	New York
28	W. B. Dick and Co.	.. "	5,560	"
28	Liverpool Storage Co.	.. "	12,000	"
28	G. B. Taylor ..	.. "	14,800	"
28	J. Roberts and Co.	.. "	2,900	Philadel.
28	W. Gibson and Co. . .	.. Lamp	2,050	Boston
28	W. H. Jennings ..	.. Lub.	440	Hamburg
BRISTOL—				
26	T. F. Fox and Co. ..	.. Spirit	215,050	New York
26	Canadian Pacific Railway ..	.. Lub.	4,800	Montreal
CARDIFF—				
30	Railton and Son ..	.. Spirit	16,800	Rotterdam
GRIMSBY—				
24	Sutcliffe and Son ..	.. Lub.	2,120	Antwerp
HULL—				
24	Helmsing and Son ..	.. "	1,000	Riga
24	Wilsons and N.E.R. S. Co.	.. "	1,280	Hamburg
26	"	.. "	3,840	Antwerp
26	Hull and Nether. S.S. Co.	Tar Oil	2,160	Rotterdam

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
July.				
MANCHESTER—				
26	Meade-King, Robinson & Co.	Lub.	10,000	Hamburg
26	W. Hodgson and Co.	.. Lub.	1,060	Hamburg
26	Geo. B. Taylor ..	.. "	98,800	New York
28	Bramwell Fern and Co.	.. "	3,000	"
NEWCASTLE—				
24	Tyne-Tees S.S. Co. . .	.. "	920	Antwerp
SWANSEA—				
26	Burgess and Co. ..	.. "	1,030	New York
GLASGOW—				
24	Anchor Line ..	.. "	61,330	"
24	J. and A. Allan ..	.. M. Colza	5,000	Philadel.
24	"	.. Lub.	20,400	"
26	"	.. "	1,200	"
LEITH—				
26	Henderson and McIntosh ..	.. "	4,000	"
26	W. Graham Yool & Co.	.. Lamp	2,180	Hamburg
26	J. Currie and Co. Lub.	640	"
26	"	.. "	2,070	"
Total for Week ..			718,660	
Total for the past Fortnight ..			5,816,650	

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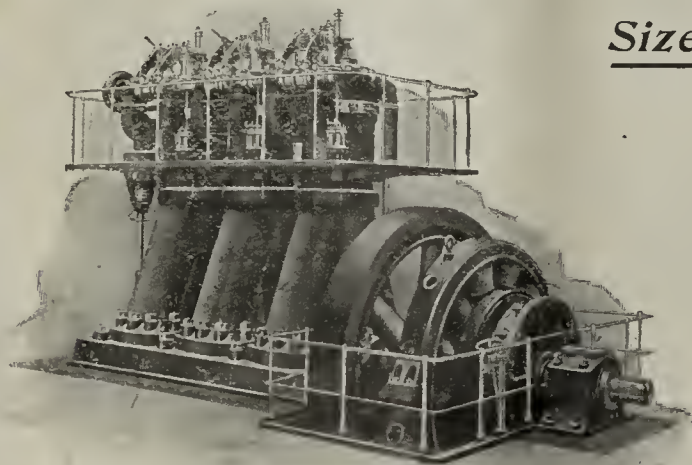
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

AUGUST 18TH, 1906.

No. 379.

Editorial Notes.

In our issue of July 21st we published *A Word about* a criticism upon the report of Mr. "Editorial *Mutilation.*" Urquhart, the General Manager of the Russian Petroleum and Liquid Fuel Co. by a gentleman who was until quite recently a prominent member of the staff at the company's property. That criticism appears to have aroused the anger of the Editor of the *Petroleum World*, who loudly complains that the letter from our correspondent was "editorially mutilated" before its publication. We are not in the habit of either manipulating or mutilating the opinions of our correspondents, but in this case we admit our blue pencil struck out a few lines which we looked upon as being rather irrelevant. However, seeing that these most concern the Editor of the *Petroleum World*, and that he is apparently greatly troubled since they have not been made public in the REVIEW, we now publish them. These are the exact words of our correspondent:—

"I should like to conclude my remarks by stating that it is surprising how the editor of a certain oil paper, who visited Baku a year ago, and whose visit lasted something like ten days, should pose to the British public as an authority on management of Baku oil properties, and defend a position which is admitted by all intelligent members of the oil industry to be untenable."

We were ever kind to the Editor of our contemporary, yet this kindness has never once been appreciated.

Though the production of the Grosny oil fields for the first six months of this year is somewhat under the figure recorded for the corresponding period of last year, the total of nearly 20,000,000 poods is by no means unsatisfactory. Last year, it must be remembered, witnessed a decidedly active period for the Grosny petroleum industry, and though Baku was in the throes of continuous disturbances, work at the Grosny fields proceeded without any appreciable suspension, the result being that the year's production shewed an increase of over 25 per cent. upon that of the preceding twelve months. This year, however, the conditions have scarcely been so highly satisfactory, for during a whole month a strike among the workers completely suspended all operations. Happily, friendly relations have been re-established between the producers and the workmen on the fields, for though the latter put forward over 30 specific demands which chiefly aimed at improving their conditions, each of these has been agreed to by the employers. The outlook, therefore, at Grosny is now very re-assuring, and everything points to the latter half of the year being a period of exceptionally great activity.

Consequent upon the continued decline in the production of the Texas-Louisiana regions, and the absence of indications as to new oil sources in the Gulf coastal districts, the talk of the necessity for a trunk pipe line from the American Mid-Continental fields to the Gulf of Mexico has been revived, and though no tangible scheme has yet been put forward, there is reason for believing that the matter will not be allowed to remain in abeyance for a much longer period. In the REVIEW on several occasions we have touched upon the question, in fact years ago we were about the first to seriously put forward claims for the construction of such a pipe. The idea so far matured that a scheme was set on foot about a year ago, but though no definite reasons have since been given, it fell through from some cause or other. Now, however, conditions have materially changed. The Texas fields are diminishing their output on the one hand, while on the other, Kansas and Indian Territory are progressing at a phenomenal rate. Only a year ago, the monthly runs from these regions were about 800,000 barrels, but now they have increased by quite a million barrels per month, so that it is not difficult to see why, in the face of enormous storage accommodation which has been and is still being erected, there is practically a glut of production, which, for the time being, cannot find an outlet. Thus the importance of such a pipe line cannot be over-estimated, and those especially interested in the American petroleum industry will await the pushing forward of this proposal with great anxiety. At the present time, a party of influential oil men are making a second tour of inspection through the territory on which the proposed line would, if constructed, be laid, and their decision is certainly of great importance to the future unrestricted development of these most prolific American regions.

The latest information from Baku is to the effect that the oil market is very firm, and prices are continuously rising, crude oil being now quoted, spot, 31½ to 32 copecs per pood; residuals, 33 to 33½ copecs; and kerosene, 35 copecs. The volume of business done is very small in view of the absence of any available supplies. Writing at the beginning of this month (o.s.) a correspondent says that on some properties the men have returned to work, whilst some firms are paying their men off. Generally speaking, the strike is proceeding quietly. The men are beginning to waver, and the majority are inclined to restart work. The production for the first half of July, as recorded elsewhere, amounted to about 8,500,000 poods, a circumstance which could not fail to have its effect on the market, where an almost complete exhaustion of stocks is felt. In consequence of this, shipping programmes made in advance are being curtailed, which is upsetting all previously made calculations and plans of operations.

Shall countervailing duty be levied in America upon the products of *America and Countervailing Duties.* petroleum manufactured in countries which levy no duty upon American products, but refined from crude products petroleum produced in Russia where a duty is levied? This is the interesting question which is now coming in for a good deal of attention in the States, and which will shortly be settled by the United States Circuit Court, an appeal from the decision of the Board of General Appraisers. The contention of the Treasury Department is that all petroleum and products thereof imported into the United States are liable to the duty levied on crude petroleum or products thereof by the country producing the crude oil. In the case under consideration the Department holds that, although the paraffin was made in Great Britain, yet being manufactured of Russian petroleum, it should have been assessed with the rate of duty levied by the Russian tariff on this product. Unless this is enforced, the customs officials assert that the countervailing principle of the Tariff Act is nullified, and countries which levy duties on American petroleum and products thereof may escape the countervailing tax by shipping their crude oils to other countries and there putting them through some process of manufacture before entering them in at American ports. We refer to the subject upon page 106.

THE FUTURE OF THE PETROLEA COMPANY.

DETAILS OF THE AGREEMENT.

The protracted negotiations between the Galician crude oil producers and the Petrolea Co. have at last resulted in agreement being arrived at, which means that "Petrolea" lives again. The new commission contracts, which will date back to the 1st of May, 1906, are to be concluded not later than the 30th September on the following terms:—The Petrolea Co. will continue to make provisional advance on all crude delivered to it on the stipulation—(1) That firms representing not less than 95 per cent. of the Galician crude oil production and the majority of owners of undeveloped oil lands shall give their adhesion to the agreement; (2) the pipe line companies and producers owning pipe lines shall sign an agreement with the Petrolea undertaking not to pump any oil of outside producers; (3) outsiders' crude oil bought by producing and refining oil shall still be considered as outsiders' firms, and as such is not to be handled by the pipe lines; (4) the pipe line companies are not to raise the pipe line charges during the term of the sales agreements beyond 20 hellers per meter centner; (5) the present executive committee of the Petrolea are to make no further sales of crude oil; and (6) the producers entering into new contracts are not to have sold in advance more than 3 per cent. of their annual output. In the event of all these conditions being fulfilled, the "Petrolea" agrees to begin forthwith making advances on crude oil up to the end of the year at the rate of 22½ francs per ton.

IMPORTANT AMERICAN PETROLEUM DEVELOPMENTS.

The feature of significance to the Gulf Coast oil industry in the situation in the Mid-Continent region, says the *Oil Investors' Journal*, is the development of the Glenn pool in Indian Territory. It is 15 miles south-east of Tulsa, and is the most interesting and remarkable district yet unfolded in Kansas Territory history. The shewing of the Glenn pool has convinced operators to a greater degree than ever before of the possibilities of ultimate extension of proven territory to Texas. Heavy oil territory has been proven at Ardmore, some distance south-west of Tulsa, close to the Red River. Glenn oil is from 38° to 40° gravity, and some of the sands are said to closely resemble those of the Pennsylvania fields. Tests have already been made demonstrating a decided southern trend to development. The Prairie Oil and Gas Co. has a two-inch line to the field with an eight-inch on the way. The district is now producing about 8,000 barrels daily, most of which is going into storage until pipe-line facilities are provided.

ROUMANIAN NOTES.

The Regatul Roman Company has struck a spouter at Baicoi, the output of which is very considerable.

The Romano-American Company has at Moreni a well which at present yields 100 tons of crude oil daily. The total production of this company at Moreni has considerably increased of late.

Amalgamation.—The shareholders, both of the Regatul Roman and Campina Moreni Companies, at their respective general meetings voted for the amalgamation of the two companies. The new company will retain the title of Regatul Roman Co., the capital of which will be raised to 24,000,000 francs.

The Roumanian Market.—The price of crude oil in Roumania continues to rise very slowly, almost imperceptibly. The demand for oil is steady, whilst supplies are short. The whole output has already been taken up by the refineries who are not yet fully satisfied. The few deals which still take place occasionally are done at 34–35 francs per ton at the wells.

In the locality of Baua, situated to the north-east of Moreni, where several wells had formerly been drilled without satisfactory results, a paying oil stratum has been struck at a depth of 320 metres, in a well belonging to Mr. Campeanu. Small eruptions are taking place from time to time but a steady yield of oil is expected only after the borehole has been cleared of sand. Mr. Hamilton is drilling a well in the vicinity of the well mentioned above, and this is nearing the oil stratum.

Oil Company's Enterprise.—The plans for the construction of a private railway from Campina to the Moreni oil field, *via* Filipeshti, are nearly completed. The line will be 32 kilometres long, and will cost about 30,000 francs per kilometre. The line, which will be constructed by the Campina-Moreni Co., will be of great importance in developing the district. It will run almost parallel with the petroliferous anticlinal of the Baicoi-Filipeshti-Moreni zone. It is possible that ultimately this line will be connected with the main railway at Baicoi station.

The Telega Oil Company's Fate.—The *Moniteur du Pétrole Roumain* learns on good authority that the Telega Oil Co., which belonged to the Disconto-Bleichroeder group, is going to be amalgamated with the Italo-Roumanian Co. Mr. A. G. Ionescu, one of the founders of the Telega Oil Co., has sold all his shares, of a nominal value of £50,000, to Mr. Davies, chairman of the company. Mr. Davies has also bought up the remaining shares of the company which were held in Roumania. The Italo-Roumanian Co. will be transformed into a new company, with a capital of 30,000,000 francs, under the title of the Prahova Co. The management of the business of the Telega Oil Co. will remain in the hands of the Disconto Co.

Electric Power at the Roumanian Oil Fields.

The *Moniteur du Petrole Roumain* in its latest issue, publishes another article by Mr. D. St. Emilian, dealing with the use of electric power at the Roumanian oil fields.

It is pointed out that the principal user of electric power at the oil fields is the Stăuua Romana. At Campina the company has five wells which are worked by electricity. Of these, four are at the Bucea group, and the fifth, which is just nearing the oil stratum, is at Gahita. At Bustenari, however, all this company's wells are worked by electricity.

The motors used are three phase, of an ordinary type, and of 30 horse-power each. The borings are provided with controlling apparatus of a very simple character: the electric power remaining always constant, the intensity of the current varies only in direct proportion to the load which the motor has to support; in other words, it is a simple

amperemeter, the index of which, however, instead of oscillating in front of a graduated arc, has a vertical movement, leaving a mark on a vertical cylinder, on which are indicated the hours and minutes, and which also has a rotary movement, making a complete revolution every 12 hours. When the borehole does not

work, the line marked on the cylinder is horizontal and at Zero; when the boring works, the index leaves a series of marks, which are the longer when the power is greater. The longest marks correspond to the manipulation of the column of casing. In this manner an easy check can be had over the work of each rig.

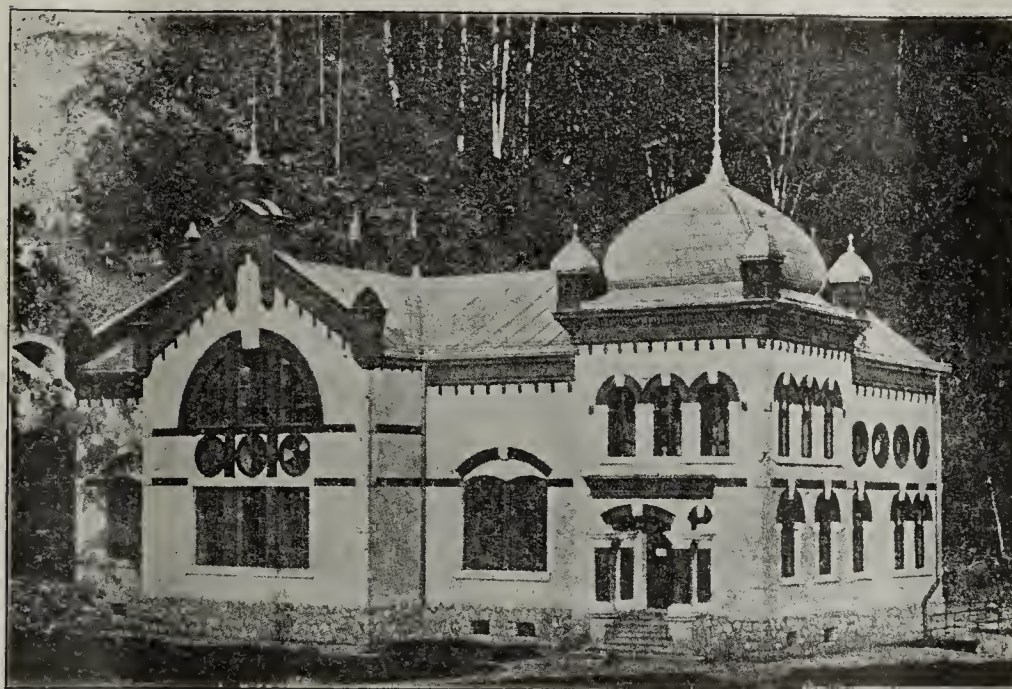
At Campina, however, everything goes to indicate that steam will ultimately replace electricity, whilst at Bustenari the wells will work with electricity. This shews us in an obvious manner the advantages of employing electricity in localities where there is great difficulty in finding the supply of water necessary for steam raising and where the transport of heavy and bulky articles, such as boilers, is so costly that there were cases when the cost of transport exceeded the original price of the article. It is exactly such conditions which prevail at Bustenari, and it was therefore easy to decide in favour of electricity.

At Campina, on the other hand, where water is found in abundance, as there are two rivers (the Prahova and the Doftana), flowing in the neighbourhood of the wells, and there are no difficulties of transport, there being two railway stations close, and the ground is not

so difficult, the advantages of electric power are not so markedly great.

Some engineers complain that for boring work electric motors behave less satisfactorily than steam engines, being unable, like the latter, to withstand a great strain. This is observed in their difficult working when raising the instrument from the borehole or manipulating the column of casing. In the opinion of the author this objection is groundless. It is not the fault of the electricity, but is due to the fact that the motors are not calculated for the maximum load which they have to bear. It is well known that at coal mines the engines work under very difficult conditions. The variations in load are very great and frequent, the movement is intermittent, and the change in speed is also very frequent. On account of this, the first engines worked with difficulty and the cost of fuel was very great. For a long

time steam engines were far from satisfying the conditions of regular and economic working. This was ultimately attained by the introduction of the compound system and the application of the automatic shut off, by the use of two cylinders coupled together at right angles to avoid the irregularities due to dead points, etc., so that at present the steam engine used



THE ELECTRIC POWER STATION AT SINAIA.

at the coal mines include all the improvements introduced into the ordinary steam engines. In spite of this, however, the electric motor succeeded in coming forward as a rival.

In petroleum borings the electric motor has had to contend against the most simple single cylinder type of steam engine, constructed very cheaply, but which had the disadvantage not only of consuming much steam, but of working irregularly, this latter being due to the dead points not having been avoided.

The author has frequently witnessed a stoppage of the engine at the moment of the passage of the piston to its dead point, and when the effort was too great. Apart from this, the change in the pace is so difficult to make and the admission of steam into the distribution chamber is so defective that for the best part of the time the engine runs either too slowly or too quickly.

For boring purposes therefore the electric motor is quite capable of competing with the steam engines used for the same purpose, and even the most perfect steam engines could with advantage be replaced by electric motors.

The cost of an electric motor being not less than that

of a steam engine, in order to shew the advantage of the electric motor, both motive powers must be considered under conditions that are identical.

It can be taken that the daily cost of running a steam engine in Bustenari is as under :—

	Francs per day.
Water	8
Fuel (crude oil)	24.60
Lubrication	0.42
Wages	2.50
	<hr/> 35.52

which works out at an annual expenditure of about 12,787 francs.

Experience has shewn that a boring rig consumes 140 kilowatt-hours per day, at a price of 0.15 francs per kilowatt-hour. This will shew an annual expenditure of 7,560 francs, and to this there is to be added lubrication, at 90 francs per annum (30 kgrs. of lubricating oil at 25 francs per 100 kgrs.) Therefore the total expenditure on an electric motor thus works out at 7,650 francs per annum.

The cost of installing a steam engine and boiler, pipes, etc., at a borehole may be estimated at 9,500 francs, while the installation of an electric motor with all necessary accessories may be estimated at 7,500 francs. This difference shews another point in favour of electricity. It is the author's opinion that the obstacles which are still in the way of the adoption of electric power at the Roumanian oil fields lie principally in the fact that Roumanian petroleum engineers are not yet sufficiently versed in the science and practical application of electricity, and in the general reluctance to supplant old methods by new ones.

Many times during the winter numbers of borings lie idle for days, whilst the electrically worked wells of the Steaua Romana continue to work in their normal way. The small producers have to suffer not only from the frost, which freezes up the water supply, but are also at the mercy of the companies who control the water supply, and who sometimes are too busy pumping water to their own wells to pay heed to their customers among the smaller firms.

The damage which may result from a stoppage of work is enormous. A large part of the daily expenditure continues, whilst the borehole does not advance, and it is therefore not surprising to find that the provisions made by those starting a borehole prove inadequate, the cost being greater and the time taken to reach the oil stratum longer than anticipated.

It may be stated as a fact that the wells of small firms lie idle more frequently from want of water than from other causes.

All these inconveniences can be done away with by the use of electricity, and it is to be expected that the newly-constructed central electric supply works at Campina will serve to bring about important changes in this direction in the near future.

—♦—
"The Oil Fields of Russia."—Messrs. Crosby Lockwood and Son, the publishers of Mr. Beeby Thompson's book entitled "The Oil Fields of Russia," call attention in another column to this interesting and instructive handbook upon the Russian petroleum industry of to-day. The publication has met with a good reception at the hands of those interested in the subject, and we trust that those of our readers who have not already obtained a copy for themselves, will lose no time in now doing so. We would here express our regret at the annoyance which must have been caused to publishers and author alike as a result of the mistake which was made in the last issue of the REVIEW, when we announced the price of this work at 3s. 3d. instead of £3 3s.

ANOTHER RECORD TOWING FEAT ACROSS THE ATLANTIC.

A STANDARD OIL COMPANY'S BARGE IN THE THAMES.

The economies that can be introduced in the transportation of oil by the towing of barges is again shewn by the fact that last week end in the Thames was the Standard Oil Co.'s five masted barge, No. 95, which



THE OIL TANKER—COL. E. L. DRAKE.

had been towed from New York by the same company's tank steamer—Col. E. L. Drake.

The same feat was performed about a year ago, and it was owing to the success then achieved that it was again attempted. The combined cargo of the tanker and the barge was about 11,000 tons, and though half of this quantity was towed across the ocean in the barge, no untoward incidents occurred, while the journey was most expeditiously accomplished.

Both vessels were fitted with wireless telegraph instruments, so that in case they should have drifted



THE STANDARD CO.'S No. 95 BARGE IN THE THAMES.

apart, they could make their position known to each other. The Standard Oil Co. have for years gone in largely for the towing of bulk oil around the American coasts, but, as we say, this is only the second time a barge has ventured across the Atlantic.

The vessels arrived at Purfleet last Saturday, and after discharging their cargo, proceeded on their return journey to New York on Tuesday.

—♦—
The Moeara Enim Company's Production.—The production of the Moeara-Enim Petroleum Co., operating in Sumatra, in July, amounted to 11,500 tons of crude. During the first seven months of 1906, this company has produced 85,800 tons of crude oil.

The Texas-Louisiana Petroleum Fields.

* * * *

An Elaborate Investigation.

(Concluded from page 62.)

As pointed out below, there are some indications of of an upward movement of ground water in the mounds and oil fields. This would involve lateral movement of surrounding ground waters toward the place of rising, thus aiding in the accumulation of oil. These considerations have a bearing on the question whether the Spindle Top oil was independent in origin from the mound itself and simply found the mound a convenient reservoir, or whether the making of the oil was a part of the same complex process which resulted in the peculiar assemblage of minerals which underlie the mound.

Reservoirs.

The Coastal Plain oils are found in two classes of reservoirs, sands and porous limestone. In either case the impervious cover is mainly of clay. Sometimes the oil-bearing sand is overlain by a thin bed of dense limestone which is locally called the "cap." As such limestones are frequent in the clays, and are no more impervious than the clays themselves, they play no essential part in the retention of the oil. They are mentioned here merely to guard against attaching significance to them.

Where the accumulation of oil in the sands is considerable, it is necessarily prevented by impervious beds from escaping laterally as well as upward. The absence of oil from coarse, loose sands may frequently be due to the fact that it is free to escape upward around the edges of the clay cover. Where circulation is free, sands so situated become the so-called "water sands."

The oil-bearing limestone of the mounds may be either porous or cavernous, or both. Where completely crystalline, a part of the oil is contained in the pores between the individual crystals. Not all the porous limestone contains oil. At Spindle Top no limestone was found with empty caverns, while at Damon Mound, where the rock is very cavernous, no oil is found. In the Matagorda field a part of the cavernous limestone bears oil, but some fragments came to the surface perfectly clear and unstained by oil. From this evidence and from the high degree of independence among wells it may be inferred that the oil-bearing limestone varies greatly from place to place in the amount of pore space, that it comprises a group of small reservoirs or compartments rather than a single large one, and that neighbouring compartments in the same "pool" may be entirely without communication.

Beneath the reservoirs in the sand are generally thick clays, and beneath the porous limestones are various impervious formations, among which clay, marl and gypsum are common. In no case can it be shewn that the beds beneath the oil are less impervious than those above. It is necessary to assume either that the oil entered the reservoir from the sides, or that, previous to its accumulation as an oil body, the substance of the oil existed in some form in which it was able to traverse clay more rapidly than at present.

Relation of the Oil to Gas and Salt Water.

Gas may be encountered at any depth, either with or without the oil. That found above the oil, or in fields where no oil is found, is commonly called "dry gas." If this be allowed to escape it sometimes happens that a spray of oil begins to shew in the gas after a few hours or a few days. This points to some communication between the reservoirs of gas and oil. Much gas is so closely associated with the oil that the two issue simultaneously. This is the "poisonous gas" of the gushers. In the reservoirs it is probably contained in the oil under pressure instead of accumulated above it. Gas is also frequently found beneath an oil body. This phenomenon

of a lighter fluid beneath a heavier indicates that the two are separated by an impervious bed.

Salt water occurs both above and below oil bodies. Two or three alterations may be found, each water horizon being separated from the next underlying oil by a bed of clay. In some cases the two fluids are contained in the same reservoir, the salt water gradually replacing the oil at the top of the reservoir as the oil is pumped out or expelled by gas pressure.

Neighbouring wells in the limestone shew by their behaviour a large degree of mutual independence. To a less degree this is true of wells in the sands. The depths of wells in the limestone vary greatly within short distances. One well may produce oil, and a deeper well near by may yield only gas, or a shallower one may be yielding salt water. The behaviour of the same well at different times may be still more strange. A few wells have gone entirely to salt water, and, after days or weeks, have begun again to yield oil in large quantities. In some cases the later yield was pure oil with no water. These phenomena of independence among wells and of abnormal behaviours are due to the subdivision of the reservoir into many compartments. Communication among these compartments is of all degrees of freedom. Some of them may be entirely sealed. A number of small rooms may be drained by the same well, either simultaneously or successively. One room may contain mainly oil, another mainly gas, or a single room may contain all three fluids. These conditions are sufficient to account for all apparent abnormal phenomena.

Well Phenomena.

In drilling by the rotary process it may occur at any time that the water being pumped into the well suddenly fails to reappear. This is called "losing the water." It indicates that a porous stratum has been entered. The nature of the rock cannot be determined except by the behaviour of the tools, for without a return flow no samples are obtainable. The failure to get a return of the water does not necessarily prevent further drilling, for, in its escape into the porous or cavernous rock, it may, for a time at least, carry with it the cuttings and thus keep the bottom of the hole clear. If the uncased part of the hole does not cave the working of the tools is not interfered with. The continued pumping in of "slush" (often thickened under such circumstances) may sufficiently choke the pores by which the water has escaped to restore the return flow, or the porous bed may be drilled through and cased, allowing the drilling to go on as before.

This sudden loss of water may occur in the sands above the oil rock, but at Spindle Top it was more frequent at the horizon of the latter. It is not to be understood that when water is lost the porous bed into which it is passing is either dry or lacking in gas pressure. It may bear water, oil or gas. The sinking of the column of water in the drill pipe merely indicates that the fluid pressure within the rock is less than that of the column in the well. Therefore, if the well be baled, it may blow out or gush, the oil being brought up as a spray, or it may be a good pumping well. Under the conditions which allow the water to be lost it must not be expected that the well will flow either water or a solid stream of oil.

A phenomenon sometimes associated with the loss of water (though either may occur independently) is a sudden dropping of the drilling tools. Frequently such a drop is reported as three or four feet, or even twice that amount, though doubtless the reports are exaggerated. Such drops are generally believed by drillers to indicate great cavities. Small drops while

drilling in the limestone may, indeed, be so explained, but in many instances a cavity in the limestone cannot be assumed. Many drops are reported as occurring in a sand just below a hard plate of limestone. The drill may have worked hours and perhaps days on the thin limestone, a strong current of water all the time washing the bottom of the hole. This current may have access by a fracture to the underlying sand and wash out a great cavity in the latter before the drill has passed through the limestone. The tools then drop. It will be observed that sand, in which the drop frequently occurs, is a poor substance to support large cavities. Probably in most cases it is not necessary to assume a cavity, but a quicksand produced by continued injection of water. A sudden loss of water may follow the drop of the tools.

Well Pressure.

The phenomena of gushing, so common in all the large fields of the Coastal Plain, implies great pressure. In some cases it has shewn almost explosive violence, blowing out casing and breaking heavy cast-iron valves. The maximum pressure has never been even approximately measured. Some closed pressures of 500 pounds and over per square inch have been reported, but these are not well vouched for. The reliable measurements vary from 79 to 350 pounds.

The following are the most trustworthy measurements which have been made of closed pressure:—

	Pounds.
American Oil and Refining Co.	79
Texas Oil and Pipe Line	112
Trans-Mississippi	300
Yellow Pine	340
San Jacinto No. 1	350

The Hooks well at Saratoga shewed a steady closed pressure of 127 pounds.

It appears highly probable that the pressure in the oil reservoir is due largely to the expansive force of the associated gas. When the oil rock is penetrated by the drill it is usually, though not always, necessary to remove the water from the casing by baling. When the pressure is thus relieved there is first a rush of gas, followed by a stream of oil, which is expelled with great violence. The oil, however, never flows in a steady stream like the water from an artesian well, but by a series of jets or pulsations. These may be relatively slow, each flow of oil lasting for several minutes, followed by an equal or longer period of quiescence, in which only gas escapes; or they may be rapid, several pulsations occurring within a single minute. The rapidity of the pulsations appears to depend, among other things, upon the depth to which the well is drilled into the oil rock; and their rapidity, and consequently the yield of the well, is generally increased by deeper boring. It is also probably influenced by the character of the oil rock, the more porous rock yielding its contained oil more rapidly than that which is relatively compact. In addition to this longer period the stream of oil generally shews a very rapid pulsation similar to that observed in a jet of mingled water and steam when a boiler is blown off.

A common method of raising oil in wells which do not flow is to carry air under high pressure to the bottom of the well by means of a small pipe within the casing. When the air is turned on and accumulates sufficient pressure to lift the column of oil in the casing, the oil is expelled in a pulsating stream exactly similar to a natural gusher. In the one case, however, the expansive force of artificially compressed air is the expelling force, and in the other case it is the expansive force of the naturally compressed gas which is associated with the oil in the rock reservoir.

In addition to the expansive force of the gas, there is also probably some hydrostatic pressure in this field, but its influence in producing the phenomena of a gusher must be relatively insignificant. Quite generally throughout the Coastal Plain region an artesian water flow is obtained at depths ranging from 600 to 1,000 feet, but this has only a very moderate head. This is seen in the 1,400-foot artesian well at the Beaumont court house, where the head is only a few inches above the surface. The invasion of wells by salt water is,

doubtless, in some cases, due to hydrostatic pressure; in other cases it is due to gas pressure.

If the pressure to which the gushing in the Spindle Top and other Coastal Plain pools is chiefly the expansive force of gas, it follows that this force will expel only a part of the oil, and the remainder will necessarily be won by pumping or by supplying the place of the natural gas by compressed air. This has already been demonstrated in the case of Spindle Top, where gushing ceased in 1903.

Surface Indications.

The surface indications which have led to the exploiting of the several fields are various. They may be divided into two classes—those which are common to oil fields in general, and those which owe their significance to the peculiar relations of the Coastal Plain oils. Almost all surface indications depend on a circulation of fluids. In lines of such circulation through the sediments of the Coastal Plain have been shewn to be very devious. A seepage at the surface, therefore, does not indicate the exact location of an oil body. The two may be miles apart. Usually surface indications are scattered throughout an area which is many times that of the oil pool. Very abundant seepage of oil or gas may result from the want of an impervious cap or of domed structures which would make accumulation possible. It is, therefore, by no means to be inferred that the escape of a large amount of gas is a better indication than that of a small amount. Indeed, the best fields of the Coastal Plain have been marked by very modest indications.

Indications Common to the Oil Fields in General.

Of the indications common to this and other fields, a seepage of oil is the best. This evidence has been found in a considerable number of the Coastal Plain fields. It may, however, be confused, as it frequently has been, with another phenomenon which bears no relation to oil—the appearance of an iridescent scum of iron oxide on stagnant water in regions where the soil is strongly coloured with limonite. This phenomenon is very common in the red-soil districts of Eastern Texas. Closely related to a seepage of oil is the asphaltic substance sometimes found impregnating the soil at shallow depths. The evidence is not so widespread as are the oil seepages in the Coastal Plain. It is well illustrated at Anse la Butte, Sour Lake, and the “Tar Springs” of Jasper county, Texas. The “sea wax” of the Gulf coast belongs to the same class of phenomena. By far the most common of all evidences is the escape of gases. Indeed, this phenomenon is so widespread that it is entirely unsatisfactory as an indication of the place where drilling should begin.

Indications Based on Local Conditions.

Some significance is attached to a number of phenomena on observational grounds alone, their relation to oil not being satisfactorily explained. Of this class of surface indications the escape of hydrogen sulphide probably deserves the most consideration. At places the bubbling up of the gas itself through stagnant water is all that is to be seen. At other places the waters have become more or less strongly sulphureted. In some districts, around the mouths of shallow wells, an incrustation of pure sulphur is continuously forming. Closely related to the escape of this compound of sulphur are the so-called “sour waters.” These are best known as Sour Lake, but are by no means uncommon. Their salts are largely sulphates, and their significance may be similar to that of sulphureted hydrogen, all being of a group of substances which are related in origin.

On the uneroded parts of the Coastal Plain, by far the largest significance has very justly been attached to low mounds of the Spindle Top type. No oil has been found in the higher mounds. Since the surficial elevation must be regarded as merely incidental to the geologic structure, and since the most abundantly oil bearing of all (Spindle Top) is but 10 feet high, it is highly probable that the characteristic structures and materials exist at many spots not marked by an elevation. The chance of finding these materials under elevated spots is, however, vastly greater than elsewhere.

THE BIBI-EYBAT PETROLEUM COMPANY, LIMITED.

The debenture holders in the Bibi-Eybat Petroleum Co., Ltd., are away on holidays at the present time. There's no mistaking this, for at the meeting which was called for Tuesday last, the Chairman of the company—Mr. J. Annan Bryce—told the gentlemen present that the meeting would necessarily have to be postponed owing to the requisite quorum not being present, nor having assented to the extraordinary resolutions to be submitted. It is the holiday season, added Mr. Bryce, and one knows how difficult it is to get a quorum when so many are away from town. Under the circumstances, the meeting stands adjourned until next Tuesday, at noon.

The resolutions which were to be placed before the meeting of debentures in the company were as follows:—

1. That the provisions of the debentures as to redemption be, and the same are hereby varied in the following manner, that is to say:—

- (a) The date for the payment of the principal sum secured by the debentures shall be November 1st, 1920, instead of November 1st, 1915;
- (b) The date mentioned in the third of the conditions endorsed on the debentures shall be November 1st, 1911, instead of November 1st, 1906;
- (c) The date mentioned in the fourth of the said conditions shall be September 1st, 1911, instead of September 1st, 1906;

2. That no dividend shall be recommended by the board to be paid out of the profits of the company available for dividend in any year prior to the year 1911, until a cumulative sum of £11,000 per annum shall have been set aside as a reserve out of the profits of preceding years, such reserve to be used, at the discretion of the board, in the purchase of debentures in the open market when they can be obtained at or below the price of redemption stipulated in the third of the said conditions; and subject thereto to be invested in the names of the trustees for the debenture holders in the purchase of trustees securities, which from time to time may be transposed, and such reserve may be used at the discretion of the directors in or after the year 1911 in the redemption by drawings of debentures in excess of the amount mentioned in the third of the said conditions.

3. That the trustees for the debenture holders be and they are hereby authorised and directed, in order to give effect to the foregoing resolutions, to execute a second supplemental trust deed between the company and themselves varying the trust deed and supplemental deed, dated respectively the 21st December, 1900, and the 26th November, 1903, the second supplemental deed to be in such form as the company and the trustees shall agree, or, in the event of any difference between them, as shall be settled by Frank Gore-Browne, K.C.

PETROLEUM STOCKS IN HOLLAND.

The following were the movements of petroleum stocks in Holland during July:—

			Amsterdam.	Rotterdam.
			Barrels.	Barrels.
Stocks on 1st July	..	..	37,019	200,928
Imports in July	..	..	18,320	181,941
Deliveries in July	..	..	37,560	209,763
Stocks on 31st July	..	..	17,779	173,106

WHERE "INDEPENDENCE" STOPS.

In the last issue of the *Petroleum World*, the name of Mr. Herbert Allen, the late Chairman of the Anglo-Russian Petroleum Co., Ltd., stood prominently before the notice of readers, for it was not only displayed in the heading of a three page report of an electrical company, but it loomed large in editorial effort. To the most cursory observer, it must have been apparent that some influence had been exerted in order to gain this cheap publicity, especially seeing that Mr. Herbert Allen has now no connection whatever with the petroleum industry. The following letter speaks for itself:—

31, Budge Row, E.C.

August 8th, 1906.

Dear Sir,

*If you care to insert
the enclosed in your next
issue for 2½ guineas please
do so, & send me half-a-
dozen copies.*

*Yours faithfully
Herbert Allen*

*The Publisher
"The Petroleum Review"*

Had the remarkable offer of Mr. Allen been accepted by the REVIEW our readers might have received in this issue a couple of pages of the report of the electrical company in question with the following heading:—

CONSOLIDATED ELECTRICAL COMPANY, LIMITED.

IMPROVED POSITION OF THE COMPANY.—Tribute to the Chairman.

The fourth ordinary general meeting of the Consolidated Electrical Company, Limited, was held at River Plate House, Finsbury Circus, E.C., Mr. Herbert Allen (chairman of the company) presiding.

While the REVIEW does not claim its "independence" from the house-tops, we are very pleased to say that the day has not arrived when disappointed members of the commercial world can purchase our literary pages, or bid per yard for our editorial columns.

PETROLEUM FOR DUST LAYING PURPOSES.

Consul L. Griffith, writing from Liverpool to America, states that the rapidly increasing use of motor cars, this country has directed a great deal of attention to the best means of laying the dust which these cars raise.

He points out that it is recognised by the highest medical authorities that disease germs are widely scattered by the dust clouds which motor cars place in motion, and that the dust thus circulated is one of the causes of consumption and diseases of the throat and lungs. Merchants' stocks are also damaged.

There has been a great deal of discussion in England as to who should defray the expense of keeping the highways in sanitary condition, and it is strongly urged that a considerable portion of the expense should be borne by those who necessitate the outlay.

Quite satisfactory results have been secured in Liverpool through the use of oil sprinkled upon macadam roadways. The surface having the cleanest and whitest appearance was that coated with creosote oil mixed with rosin, while that covered with creosote oil, mixed with tallow, had the least odour. The surface covered with ordinary petroleum was the first to shew the dust. The next in order was a mixture of creosote oil with rosin and tallow, and then the hot creosote oil alone. Creosote oil mixed with pitch, cold creosote oil, and hot creosote oil, mixed with a small quantity of pitch, gave good results, but the latter gave a bad appearance. The heavy black oil (coal tar waste oil) lasted slightly longer than the creosote oil, and was much cheaper. The Texas crude petroleum gave the most lasting results, and portions of the road heavily coated with this oil shewed a somewhat glazed surface, formed of oil and dust.

From the standpoint of the wear and tear of the road surface, the oiling on the whole has proved advantageous; the wear appears to be less; the surface of the road dries more quickly after rain; and the number of loose stones picked up has been reduced. The first sprinkling kept the surface in good order for three weeks, at the end of which time it was thought advisable to recover the area. The good effects of the oil on the surface after a second coating had been applied had not entirely disappeared after the lapse of five weeks. The cost varied from one-half cent to one cent per superficial yard. Some complaint was made as to the smell of the oil, especially the creosote, but against this it was claimed that as long as the smell remained flies practically disappeared from premises adjoining the roads. Oiling wood pavements in Liverpool was done in the same manner and the dust satisfactorily kept down, a result previously not obtained even by watering four times a day, and the surface of the road was maintained in good condition during dry weather without gravel. It became somewhat slippery during a rainfall, and to avoid this it was found necessary to sprinkle a little gravel in the roadway.

The district council of Norwich has also been experimenting with the dust-laying problem, sprinkling with a calcium chloride solution. This is made by dissolving one hundredweight of calcium chloride in 100 gallons of water. The chloride is sold at \$7.29 per ton at the chemical works. The experiment was tried for 14 days over three lengths of main road. The first cost only \$4.44, as against \$9.73 with water, which has to be applied daily; the second, \$8.89, against \$20.33; and the third, \$8.83, against \$40.55. The liquid appeared to change the gravity of the dust particles,

preventing them from being blown about either by wind or motor cars. The roadway seemed to be bound, and in dry weather had a good surface. The liquid absorbed the moisture, and each night an amount of moisture was gained, which prolonged the effect of the treatment. This reviving influence was apparent for fully three weeks after the expiration of the treatment. During wet weather there was a tendency for the surface to work off in layers, but it quickly dried and set hard. The conditions vary so greatly, it is preferable, perhaps, that the method of application should be determined by experiments in each particular district, but the result of the treatment of roads in Norwich has been most satisfactory to the surveyor of the council.

FINANCIAL REORGANISATION OF THE ACTIEN GESELLSCHAFT FÜR NAPHTHA INDUSTRIE OF GALICIA.

The A. G. für Naphta Industrie, an enterprise formed by the Austrian Credit Bank, the Hungarian Credit Bank, the Rothschilds and Deutsch Fils, is about to be re-organised and its capita reduced. The company was formed in 1896. It appeared then that the Fiume Mineral Oil Refinery, which was likewise a creation of the Rothschild group formed in the eighties, was in danger of having to reduce its output owing to a shortage of the crude oil supply, and as at that time some new and very prolific oil lands were discovered in Galicia, the capitalists interested in the company resolved to form a company which would supply the crude oil to the refinery. The shares were taken up by the different parties in the same proportion as in the Fiume Refinery Co. The original capital proved insufficient, and in order to extend the operation the company was compelled to repeatedly increase its capital, until in the end it reached 10,000,000 kronen.

The results of the exploitation of the company's properties underwent many fluctuations. There were years when the company had a production of 100,000 tons of crude oil, but during recent years, and more particularly in the current year, the output at Boryslaw has declined considerably. In view of this the capitalists interested in the company have resolved to write off large amounts for depreciation and reduce the capital of the company. The balance-sheet for the past financial year shews a loss of 1,100,000 kronen. At the general meeting held on July 28th a proposal was submitted to reduce the capital by issuing one new share for every 10 of the old shares. The share capital will in this way be reduced by 2,700,000 kronen, of which 1,100,000 kronen will go to cover the losses incurred and 1,600,000 kronen will be applied for depreciation of the assets. At the same time there will be an issue of 5,000,000 kronen worth of new shares, and the creditors of the company will receive shares for the money owing them. The capital of the company in the future will be 5,300,000 kronen divided into 13,250 shares of 400 kronen each. The losses are borne exclusively by the original founders of the company, who have kept all the shares in their own hands. The new shares which will be issued will likewise for a long time not come on the open market.

The Austrian Credit Bank are taking kr. 1,250,000 worth of the new shares. The loss of 700,000 kronen resulting from the reduction of capital will be covered by the company's ordinary reserve fund. The company also owns 6,000 shares of the Fiume Refinery Co.

THE BAKU NAPHTHA COMPANY.

The annual meeting of the Baku Naphtha Co. took place at St. Petersburg recently. There were present 120 shareholders, holding 18,575 shares, and entitled to 636 votes, out of a total number of 30,700 issued shares. Of the more important shareholders there were represented the St. Petersburg International Commercial Bank (5,487 shares), the St. Petersburg Discount and Loan Bank (1,160 shares), Mr. G. Vavelberg (957 shares), Volga-Kama Commercial Bank (883 shares). Mr. V. P. Bradke was elected to the chair.

The report and accounts submitted by the directors shewed that in the financial year 1905-6, the thirty-second since the formation of the company, the production of crude oil on the company's properties amounted to 23,983,790 poods, against 26,695,026 poods in the financial year 1904-5. The decline in production took place only in the Balakhany-Saboontchi field, due solely to the stoppage of work during the disturbances. The output on the company's Bebe-Aibat property shewed an increase against the preceding year (6,104,962 poods against 3,654,960 poods).

The directors in their report explained that the operations of the company in the past financial year were attended by circumstances of a quite special nature. Events at Baku in the past year attracted the attention of nearly the entire world, and not only shook the petroleum industry to its foundations, but placed other Russian industries in an exceedingly difficult position by depriving them of their fuel supply. Although the properties of the Baku Naphtha Co. were not in themselves made the objects of attacks by pillages and incendiaries but caught fire only by the spread of the flames from adjoining plots, the material losses suffered by the company during the August events were nevertheless very considerable, and the plant and buildings on the properties, even if not entirely burnt down, were much damaged. The dwellings, storehouses and workshops at Balakhany were left intact, whilst at Bebe-Aibat they were almost completely destroyed by fire. The total loss by destruction of property and expenses incurred as a result of the disturbances amounts to 463,000 roubles. In reply to a petition from the petroleum producers, the Russian Government has set aside a sum of 20,000,000 roubles for making advances to petroleum producers for 10 years at $5\frac{1}{4}$ per cent., to enable them to re-equip their properties.

The Baku Naphtha Co. could have obtained in this manner an advance of 484,000 roubles, but the directors having sufficient funds at their disposal declined to accept the advance. Apart from the above-mentioned losses, great damage was done to the properties by the long interruption in baling operations. During the period of idleness, the wells were flooded with water, which choked the flow of oil, and when baling was resumed it was found that the productivity of the wells had materially declined.

The period of inactivity at the wells lasted about one month. The work of restoring the derricks and other property was started at the earliest possible

moment, and on September 20th the production of crude oil began on the company's property at Balakhany, and on September 29th at Bebe-Aibat, and by January all the most productive wells had been restored.

Having reviewed the effects of the events at Baku in one direction, the directors proceed to view the subject from another standpoint. The decline in the output of crude oil in consequence of the strikes and riots, and mainly the fears for the future supply, together with the exhaustion of stocks, has led to a rapid advance in the prices of crude oil and fuel oil at Baku and in the interior of Russia, which, together with the financial assistance granted by the Government, produced a feverish activity in the work of restoring the oil fields. The growth of the production of crude oil, however, is proceeding very slowly. Since the resumption of work after the riots the highest monthly output was reached in April—namely, 41,000,000 poods—beyond which it has so far not gone. This is due mainly to the watering of the wells and the difficulty of restoring the drilling outfits destroyed during the riots. Under such conditions a decline in prices of crude oil and products can hardly be expected in the near future, even should drilling operations increase and should there be no further stoppages of work, which have lately become so frequent at Baku.

Speaking of the company's natural gas business, the directors explain that in the past year this was worked with the ultimate object of being able as soon as possible to completely substitute natural gas for crude oil as fuel on the company's properties at Balakhany-Saboontchi. During the past year out of a total consumption of fuel equal to 4,838,926 poods of crude, 2,996,836 poods were replaced by natural gas. Valuing the gas at the cost of the crude oil which it replaces, and deducting the cost of producing and delivering the gas, it is seen that the exploitation of the Surakhany gas field has in the past year yielded a profit of 347,796 roubles.

As regards boring operations, drilling was continued in 25 wells transferred over from the preceding year, and in 16 wells started in course of the twelve months. Of the total number, 19 were completed. Altogether during the period under review drilling work was carried on in 73 wells, and the length drilled was 20,776 feet (against 31,598 feet, 26,012 feet, and 14,637 feet in the three preceding years). The expenditure on boring work and apparatus connected therewith amounted to 988,000 roubles. In addition, there was expended on new construction and purchases 463,000 roubles. The value of the properties, after deducting the 281,000 roubles, worth taken out of use, has during the year increased by 181,000 roubles.

In regard to their plans for 1906, the directors state that the firm tone of the petroleum market and the high prices prevailing would permit an immediate considerable increase in the scale of boring operations, but the almost total destruction during last year's riots of the boring outfits of many boring contractors renders the carrying out of such intentions very difficult. Altogether there will be in drilling during 1906 (nine

months) 54 wells, on an area of 229½ acres. This amount of drilling work will, in the opinion of the directors, be sufficient to maintain the output on the Balakhany-Saboontchi property. As regards the Bebe-Aibat property, in view of the forthcoming auctions for petroliferous plots adjoining the company's property, it is necessary to take steps to protect the borders of the property from exhaustion by the future neighbours, and therefore at Bebe-Aibat the boring activity is to be somewhat increased. The expenditure on boring and the erection of necessary buildings on all the company's property is estimated at 1,577,127 roubles.

The gross revenue for the past year amounted to 4,584,719 roubles against 3,640,026 roubles in the preceding year. The average price realised for the crude oil was 19.3 copecs against 12.7 copecs in 1904-5. The expenditure together with depreciation of property amounted to 3,319,499 roubles. The net profit for the year was 1,265,219 roubles, out of which there was distributed as dividend among the shareholders a sum of 923,088 roubles.

The meeting approved of the accounts and the proposals of the directors as to the distribution of the profit. The meeting also sanctioned the estimate of expenditure in 1906 to the extent of 1,577,127 roubles, and the directors were authorised to issue the 480 shares which were left of the new issue and sell them on the Stock Exchange, and the premium realised above par to be added to the insurance fund. The directors were further authorised to bid at the forthcoming land auctions at Baku for the five plots on the drained Ramany lake, and make all necessary purchases of land and other property in connection therewith.

The directors reported that Mr. E. V. Gloushkov had, through illness, been compelled to resign his seat on the board, and proposed that Mr. M. P. Korsakoff be elected in his stead.

THE OAKBANK OIL COMPANY, LIMITED.

The shareholders of the above company met in an extraordinary general meeting at Glasgow last week, Mr. John M. Easton presiding.

The Chairman explained that the equalisation of the shares having been carried out, the meeting had been called to give effect to the generally expressed wish of the shareholders to have the shares of the company subdivided into the nominal value of £1 each, and he therefore moved, "That each of the 20,000 ordinary shares of £10 in the capital of the company, whereon £8 10s. is paid up, be sub-divided into 10 ordinary shares of £1 each, with 17s. per share credited as paid-up thereon, and that the shares resulting from such sub-division be numbered consecutively 1 to 200,000."

Mr. Charles Fraser seconded.

A Shareholder said that he supposed that it had not been suggested by anybody that the shares should be fully paid up and arranged accordingly.

The Chairman said he was not aware of any such suggestion.

Another Shareholder remarked that there was no doubt that the fact of the capital not being fully paid up was a source of strength to the company which it otherwise would not have.

Mr. Fraser explained that oil companies were peculiar in this way, that they had frequently during summer to hold heavy stocks, the products not being very saleable during that time. Luckily this year their sales had been very good, and they had not held such heavy stocks; but they had held in the past, and no doubt they would hold in the future, very heavy stocks, and it was very profitable to the company to have an amount on credit, such as they could get much more readily by having a small proportion of the capital uncalled. They would notice that in most companies it had been the practice—and he thought profitably so—to have a certain amount of capital uncalled.

The motion was carried, and the business of the meeting terminated.

AMERICAN PATENTS GRANTED.

Oil Pump.—Henry L. Leilich and John P. Burger, Delphos, Ohio.

In a pump a cylinder having a main compartment and an auxiliary compartment, each provided with a valved exit, a discharge tube leading from the main compartment and having an outwardly opening valve, a return tube leading to said compartment and having an inwardly opening valve, means opening communication between the two compartments, a piston rod in the cylinder, a piston carried by the rod within the main compartment, and operative to create an expelling force through the discharge tube, and a suction through the return tube, and a piston carried by the rod in the auxiliary compartment for augmenting the suction created in the return tube by the other piston.

Oil Pump.—Henry L. Leilich and John P. Burger, Delphos, Ohio.

A pump, comprising a cylinder having a foot-valve, a plurality of super-imposed compartments, and a valved exit from each compartment, a discharge tube leading from the lower compartment, and having an outwardly opening valve, a return tube having branches leading to each compartment, and provided with inwardly opening valves, a piston rod in the cylinder, and a piston carried by the rod within each compartment whereby to cause an intermittent discharge through the discharge tube, and a substantially continuous suction through the return tube during the operation of the piston rod.

Oil Flushing System.—Mark D. Mitchell, Franklin, Pa.

The method of accelerating the supply of oil to a pocket within an oil-bearing stratum, devoid of natural pressure consisting in applying and confining an artificial pressure medium with respect to the stratum at a distance from the pocket, and causing such medium to permeate and pass through the stratum and escape through the pocket.

Apparatus for separating Oil or Grease from Fibrous Materials.—Nathan C. Lane, Philadelphia.

An apparatus comprising spaced inner and outer tanks or containers, an overflow gutter arranged between the upper edges thereof, a removable cover for said inner tank, means for supplying steam to the space between said tanks, means for admitting and discharging water and steam to and from said inner tank, a removable support in said inner tank, a pressing device and a drain leading from said pressing device into said gutter.

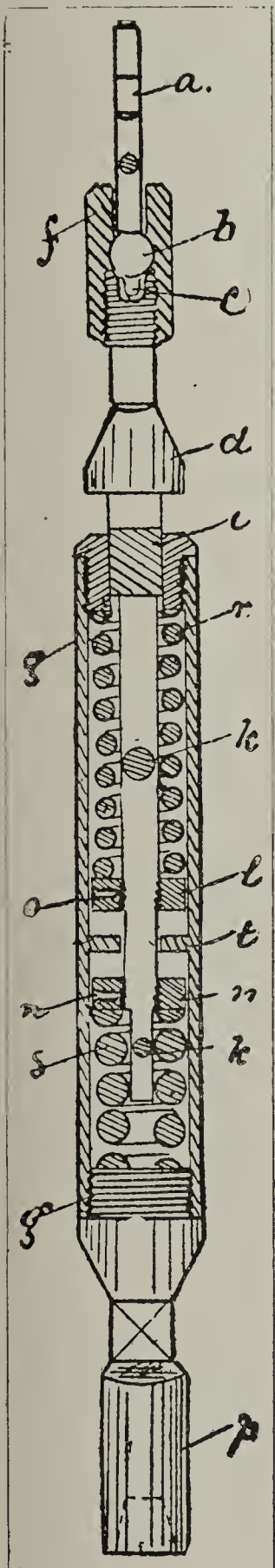
Oil Distributing Apparatus.—Harry W. Stocking, San Francisco, Cal.

In an apparatus for distributing oil upon the seas, a drag-anchor or float, a flexible cable by which it is connected with the vessel and its distance therefrom determined, an oil-containing receptacle located upon the vessel, a flexible pipe extending from said oil supply to the float, means by which said pipe is suspended at intervals from the cable, divergent connections horizontal from the end of the pipe, nozzles through which oil is discharged upon opposite sides of the float, and means whereby the drag or float is prevented from turning, and the horizontal position of the discharge pipe maintained.

A NEW CONTRIVANCE FOR THE PROTECTION OF DRILLING POLES.

Our contemporary, *Naptha*, says that Mr. Leopold Slotwinski, of Boryslaw, has lately invented a new contrivance for the protection of the drilling poles from cutting and cracking. The contrivance is herewith illustrated, and for the guidance of our readers, the description given by the inventor will be interesting.

A represents the handle of the movable connection piece; b, bowl of the handle; c, the flat adjoined piece which does not permit a movement of the handle in the bowl bed; f, the connection muff between the handle and the contrivance; d, the chief handle of the contrivance, to which springs are fastened for the purpose of intercepting or weakening the violent blows of the shears, especially upward, during the raising of the weight in the course of drilling, and downward at the time of the falling of the poles together with the upper part of the shears; i, a revolving steel rod, with square opening, in which the pole moves; r, spiral springs of adequate power of resistance; k, broader, round part of the handle; l, nut upon which the upper screw presses: t, partition wall which separates the upper separation part of the apparatus from the under (the handle goes through the latter and under there is a second nut, m); k, the under and thinner part of the handle which enters into the lower spring; p, the muff which corresponds to the calibre of the weight; g, partition for taking up parts of the contrivance: s, under spiral screw (stronger than the upper); n, securing peg for the nut against screwing apart; o, second peg with the same purpose.



Hitherto two such contrivances were employed by way of test, one in the well "Feniks" No. 2, at Potok, and the other in well No. 3, of the Laszcz field, in Tustanowice. Both operated most satisfactorily. They can be made for different calibre, as calibre 125, 105, and 80 for 10-inch and 9-inch pipes, for 7-inch and 6-inch pipes, and finally for 5-inch pipes, since the firmness of the spring must be chosen corresponding thereto. The reduction joint for the poles is movable; therewith the latter can give way on all sides during the

drilling, and so the well-known frequent cracking is averted with the chief poles. The inventor maintains that the pole splitting happens more seldom by the employment of his apparatus. As a rule he had one, at most two, split poles during the drilling of six wells, while formerly no well was operated without the splitting of one or two poles. The advantages of the described contrivance are comprised of the following:— Greater and longer resistance power in the poles, increased drill safety, less danger of clogging. The cloggings up proceed very often from a hard blow of the down-falling upper part of the shears, together with the pulled-down drill poles, but with the contrivance in question this is averted.

PETROLEUM PROSPECTS IN NEW ZEALAND.

After somewhat spasmodic prospecting and boring operations, extending over a period of about 30 years, oil has at last been found in considerable quantity in one of the bores at New Plymouth, on the west coast of the North Island. For a time oil was rushing out of the pipe at the rate of a barrel a minute. The discovery has created some stir in the district, and £5 shares in the company rose quickly to £60. The company is a local one with only a small capital, and at a meeting of the shareholders it was resolved to liquidate the present company, and to form a new one under the name of the Taranaki Petroleum Co., with a capital of £120,000 in £1 shares, the shareholders in the original company to receive 56,000 fully paid-up ordinary shares. At present, says the *Times* correspondent at Wellington, the well is sealed down, and there is not sufficient evidence to warrant one in stating that there will be a permanent flow of oil from a number of bores. The company's expert, however, is satisfied that an important oil field has been tapped. Sir James Hector, formerly director of the New Zealand Geological Survey, on the other hand, reported some years ago that the district, geologically, was one from which a large oil supply could not be expected, and in the face of his report some of the New Zealand newspapers have sounded a warning note against undue speculation until the venture is further proved. Meantime all that can be said is that the prospects are encouraging. The success at the New Plymouth bore has stimulated enterprise in the same direction in other parts of the colony, notably at Gisborne, on the east coast of the North Island; and at Greymouth on the west coast of the South Island, where indications of oil deposits are numerous. At Greymouth, a local company has decided to bore to a depth of 2,000 feet.

NEW COMPANY.

BRITISH SHALE OIL AND FUEL COMPANY, LIMITED.

Registered August 8th. Capital, £5,000 in £1 shares. Objects, to adopt an agreement between E. Hecht, executor of the will of M. W. Lowinsky, T. H. Lowinsky, W. H. Pitts, and the company, for the acquisition of land and of mining leases and certain agreements relating to land in Dorset; to acquire shale or oil-bearing lands in the United Kingdom or elsewhere, and to carry on the business of refiners of and dealers in shale and other mineral oils and the products thereof, fuel manufacturers, etc.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	11-13
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/6-3/3
..	£650,000 5½% Pref.	£1	5/3-5/9
Bibi-Eybat Petroleum Co. ..	£250,000 Ord.	£1	5½-5½
Californian Oilfields ..	£550,000 Pref.	£1	2/0-3/0
European Petroleum ..	£550,000 Ord.	£1	0/6-1/6
" ..	£376,000 Deb.	£100	84-87
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	9/6-10/6
..	£600,000 Ord.	£1	8/0 9/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	6/6-7/6
..	£575,000 Ord.	£1	2½-2½
Shell Transport & Trading ..	£2,000,000	£1	28/6-29/6
" ..	£1,000,000 Pref.	£10	9½-9½
Spies Petroleum Company ..	£312,500	10s.	6/9-7/3

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on August 13th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	570	575
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	3,875	3,925
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	138	140
cheff & Co.	250	—	—
Neft Co.	250	—	—
Nobel Bros.	5,000	8,300	8,400
"	250	—	—
Rops and Co., V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading	250	—	—
Co.	250	—	—
" (Second Issue)	250	—	—

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 17th August, 1906, as follows:—

The market is firmer, and a considerable amount of business in oil sizes has been done during the past week. We make prices to-day as under—

1c 18½ × 14	124 sheets	110 lbs.	13/1½ to 13/4½ per box.
1c 19½ × 14	120 "	110 "	13/1½ to 13/4½ "
1c 20 × 10	225 "	156 "	18/1½ to 18/6 "

F.o.b. Wales. Tin lining and iron hooping extra.

The August Korff Refinery Company of Bremen propose to distribute a dividend of 25 per cent. for the first half of 1906, against 18½ per cent. for the corresponding period of 1905. This company refines exclusively American petroleum oils.

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8½ pd	£199,750	£10	18½
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Burmah Oil, Ord.	£1,100,000	£1	57s. 6d.
Do. Pref.	£250,000	£1	55s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8½
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	18½
Do. New (£8 10s. pd.)	£131,750	£10	17½
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	99s. 6d.
Do. (17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	12½
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	35s. 9d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	70s. od.
Do. "B" Deb...	£150,000	£100	145

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	—	80	1,000
Aurora (Deb. 5%)	—	90½	—
Campina Poiana Mij. ...	—	39	—
Dordtsche Petroleum Mij. (Pref.) ..	121	122	500
Do. (Deb. 4½%)	102½	102½	1,000
Elzasser Petroleum Mij.	1½	2	1,000
Gaboes	—	19½	—
Holl. Rumeensche Petroleum Mij. ...	33	34	1,000
Int. Rum. Pet. Mij.	99½	87	500
Java Petroleum Mij. (Ord.) ..	—	30	1,000
Do. (Pref.)	—	38	—
Koninklyke Nederl. Pet. Mij. Shares	698½	570	250-1,000
Do. Share certificates	699½	570	1,000
Mœara Enim Petroleum Mij. ..	123½	112½	100
Do. 1-1,000 Oblig. 5	101½	102	250-1,000
" Moesi Ilir " Petroleum Mij. ..	44½	44	—
Nederl.-Rumeensche Petroleum Mij.	—	17½	—
Nieuwe Ned. Petroleum Mij. And...	—	55½	1,000
Oliebronnen in Hannover Mij. ..	111½	137	—
Do. (Deb. 5%)	98½	99½	—
Panolan Maatschappij Cert. ..	—	355	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	135	135½	1,000
Do. (Common)	118½	115½	—
Sumatra-Palembang Petroleum Mij	79½	71½	500
Zuid Perlak Petrol. Mij. (Pref.) ..	88	88½	—

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the fortnight ended August 11th has been nil owing to the strikes.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the fortnight ended August 12th has been nil owing to the strikes.

SPIES PETROLEUM Co., LTD.—The output for the week ended 5th August was 171,560 poods, or 2,768 tons and for the week ended 12th August was 146,850 poods, or 2,350 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production has been nil since our last issue.

BORE HOLES FOR OIL

Contracted for by

JOHN M. THOM,

Canal Works,

Patricroft, MANCHESTER.

CONTRACTOR TO H.M. GOVERNMENT.

A SOUND INVESTMENT.

No better Investment could be possible for anyone desiring to become fully acquainted with the Petroleum Trade throughout the World, than the purchase of the Bound Volumes of the "Petroleum Review."

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to the petrol supply, which cannot for one moment be substantiated. True it is, that the use of petrol in this and other countries is increasing most rapidly, and it is equally true that the regions which have in the past been responsible for the production of America's high grade petroleum and upon which at present we are dependent for America's supply of petroleum spirit, are consistently declining, yet to take cognisance of these facts without seriously considering the counter-balancing trend of events, is to arrive at conclusions that are entirely erroneous.

We cannot close our eyes to the fact that a great necessity exists for the further investigation of the possible mixtures of the heavier products of petroleum in order that these may enter the field of general use for motor traction, yet should this phase of the question remain for years in the list of future problems to be solved, the interests of the motor industry, so far as a continuous supply of petrol is concerned, will be perfectly safe. A few months ago we published in the REVIEW the results of investigations made by Dr. Dvorkovitz with reference to the products of petroleum which were especially suitable for motor traction, and it is gratifying to find that since the publication of that article, public interest has been aroused in a subject that had hitherto received little or no attention. There it was clearly pointed out that, so long as the motorist judges the value of his petrol by its specific gravity and nothing else, and so long as he will demand a spirit say of .710 specific gravity, then, and not unnaturally so, the supply of the article will be limited, and an increase even in the present price is by no means out of the question. As is well known, the chief sources for the supply of crude oil for the manufacture of petrol as we know it to-day are the fields of Pennsylvania and the regions in the Far East. In the case of the latter-mentioned territories, although the production of crude oil is proportionately small, the percentage of benzine in the oil—we refer to the Sumatra product—is very high, and approximately 25 per cent. of the total crude oil production takes the form of benzine. Roumania, Galicia, and Russia are of course responsible to some extent for the manufacture of benzine, but the trade in these respective countries in benzine is not very extended, and has only within recent periods been placed upon anything approaching a business-like basis. In the present instance it is not our intention to go into figures, but it can be taken for granted that the world's supply of benzine to-day is approximately 1,000,000 tons—a little under rather than over.

In dealing with the law of demand and supply generally, we are aware that the former regulates the latter, but when considering the question as to the quantity of petroleum spirit of a certain specific gravity that can, year in and year out, be depended upon to satisfy the needs of the motor industry, we must remember that there are bounds beyond which it is not possible to go, and it is in this connection what we say once the consumption of petrol exceeds 1,000,000 tons a year, then we may have good reason to expect a shortage.

Consequently, while being no pessimists, it behoves us to consider in what way the supply of petrol can be increased to such an extent that the most extended use of the spirit will be unable to exhaust the supply.

Our contention all along the line has been that the proper standard from which to judge the suitability of petroleum spirit is not (as is the popular opinion) by its specific gravity, but from the boiling points of the various fractions the spirit contains. Let us emphasise this point. A petroleum spirit may have a low specific gravity, yet the boiling points of its component fractions may be very high, and consequently (contrary we know to general opinion) it is far inferior to a spirit whose specific gravity may be high, yet which contains fraction that have low boiling points. This is the question which the motorist has to decide for himself, and his decision will in itself be an answer as to whether the supply of petrol in the future will be more than sufficient to meet all possible demands. Should the motorist adopt the course which we have suggested, then an impetus will be given to the petroleum industry, and additional sources of supply will be available, but should he still cling to the idea that nothing but a very light spirit will answer his requirements then he will only have himself to thank in time to come.

TO CONSOLIDATE THE GERMAN PETROLEUM INDUSTRY.

A movement is now in progress among the firms engaged in the petroleum industry in north-west Germany, having as its object the consolidation and improvement of that industry. The leading factors are the International Boring Co., the Deutsche Tiefbohr-gesellschaft, the Celle-Wietze Co., and the petroleum companies controlled by the Deutsche Bank. The International Boring Co. possesses producing oil fields of its own, and has recently also acquired the Hannoversch-Westfallische Erdoelwerke (late Reinold and Schrader) and the Hannoverian Refining Co. connected with, and also possesses the majority of the shares in a Dutch company operating in Hanover. The Deutsche Tiefbohr-gesellschaft own the Hausa property, the Elsass Petroleum Co., the Pechelbronner Oil Co., and the Gute Hoffnung Oil Co. The Celle Wietze Co. are connected with the Saigge Mineral Oil Refinery, the Wietze Petroleum Boring Co., the Rhenisch Westfalian Oil Co. Lastly, the Deutsche Bank owns the Wietze-dorf Oil Co. Further combinations are about to take place between these groups. The properties controlled by the Deutsche Bank and the International Boring Co. respectively, adjoin each other.

RUSSIAN IMPERIAL DECREES.

By Imperial decree issued on June 26th, Messrs. Nobel Bros. have obtained the lease of a portion of lake Beguk Shor, of an area of 135 acres, for the purpose of construction of oil reservoirs. The term is for 12 years, and the rental 3,000 roubles per annum.

Another Imperial decree has been issued granting an extension of time of two years for commencing the exploitation of the petroliferous plots at Berekei, Nos. 73, 77, 125, and 129. Drilling on these plots, however, must commence not later than the end of the third year from the date of the granting of the original concessions, failing which the concessions will be revoked and the plots considered free for new applicants.

THE MANAGEMENT OF THE RUSSIAN PETROLEUM AND LIQUID FUEL COMPANY, LTD.

CONCEALMENT OF GROSS ERRORS.

For the edification of those gentlemen who are disposed to bear with reason, and whose minds soar above the vituperative belching poured forth by your contemporary's angry pen in its issue of the 21st July, regarding the criticism on the mismanagement of the properties of the Russian Petroleum and Liquid Fuel Co., I propose in this inquiry to follow truth wherever it may lead, to interrogate facts and to disclose the gross errors which have been concealed by the respect paid to authority. Reducing the declamation of your contemporary to its most compact form, the following conclusion can be safely put on record: "That anyone, be he under the Urquhart *regime* or not, who should choose to enlighten readers other than those of your contemporary with patent facts regarding the mismanagement of the English companies at Baku, must be instantly dismissed." To comment upon such dishonourable pleading is to waste time, but nevertheless it distinctly shews to what a depth the human mind can descend, and how very distasteful the truth can be to some people.

It is a notorious fact that it is this very fear of dismissal that has withheld others from reporting the truth long ere this, and with sorrow be it said, this fear is instrumental in causing those at present serving to accept a life of compromise or agreeable common-place as a thing that must be, because it is. It is, further, a matter of fact, that if the workmen and others could but write English the entire British press would have been besieged with complaining letters. Does your contemporary know nothing of the request which was made by the Auditing Department here, on behalf of the shareholders, to have a committee to investigate the cause of Oleum's systematic fall in production?

Apart from all this, a conspicuous feature in what your contemporary prides itself with what it would like others to believe "a defence," is that it has failed to disprove one single assertion, but, on the contrary, has blundered forth, striking out right and left, and displaying an enormous lack of common knowledge, which to evenly balanced minds must disqualify it even as a critic. In what follows, I think I shall be able to conclusively shew the many fatuous inconsistencies it has committed, and, were it not for these, I should be tempted to dismiss with a sentence its assumption to dabble in oil matters. As a mouthpiece for the Baku-English companies, your contemporary does not even seem to be posted in the fact that the workmen of the Bebe-Aibat Co. are reputed for their socialistic propensities, and that it is due to Mr. Mancho's personality, together with the fact that he is undoubtedly the best authority on oil matters in Bebe-Aibat, if not Baku, that he was able to have a production of about 12,000 poods. Had Oleum's manager had such men to deal with as Mr. Mancho has, he would have been obliged to either shut down the property or have no production at all. The manner adopted in attempting to explain away the unsuccessful cementations, and by attributing the peculiar conduct of this particular well—No. 61—to an act of God, finds no place in this discussion, for in oil properties which cannot boast of so many producing wells as in Oleum, such a mishap as that which befell well No. 61 would have led to the property manager's instant dismissal. This is not merely a deduction of oil property management, it is a fact of experience. What was there, I would like to ask, peculiar about the conduct of well No. 61 other than the hitch that took place when cementing it.

That the Government insists on the use of cement surely cannot be an argument that wells giving average productions are to be deliberately spoiled. If reference be made to my former letter, it will be clearly seen that nothing disapprovingly has been said against the importance of perfect cementation or the general adoption

ANOTHER IMPORTANT LETTER FROM BAKU.

of the system of cementing. Perfect cementation is most desirable, but it cannot be said that the cementations that were carried out in Oleum from September of 1904 till August of 1905 approached perfectness in any way. My only objection was to the promiscuous and wanton use of cement. If the wells had been allowed to remain in the state in which they were found by the new management, the production would certainly never have fallen from 560,000 poods to 182,000 poods and less per week, as can be judged from the fact that these wells which escaped cementation continued to give oil. As for deeper drilling, and, according to your contemporary, the wells were "to reach a great depth and have diameters, which would enable the drillers (?) to bale if the wells do not spout," the truth of the matter is that the present property manager has been forced to cut out casings from some of these very wells, as the diameter was much too small to permit deeper boring, and had there been no change made in the management of the property after the fire, something like 45, instead of 15, compressors would have been necessary. It is a fact, and one that carries a great deal of weight, that the present property manager is said to be the only man capable of redeeming the property. But time shall prove that.

It is not worth while to dwell at further length upon the failure of the new management to improve the productions of the several companies, or upon your contemporary's inadequate knowledge of oil property work. Its speculations upon this subject lack that definiteness and coherency which at once gives them the stamp of twaddle. If its readers do not tire reading such incoherent and confused expressions and erroneous statements, some of which are enumerated below, it goes to prove my assertion that little is understood of oil property management. Your contemporary makes no secret that several reports have been sent over from Baku, so the question to be asked is by whom and to whom? Doubtless to your contemporary. Lack of time prevents my probing this matter too deeply, so I will pass on to some of the unpardonable mistakes with which your contemporary's tirade teems. Says this shining light and personification of Baku edification, "The company started with Mr. Babaieff as well manager, then came Prince Toumanoff, Mr. Russell, and after him Mr. Willans." I am by no means astonished at this expression of ignorance as it is characteristic of all that has been written by your contemporary. Not one of these individuals has ever been in the management of the property of the Russian Petroleum and Liquid Fuel Co. Mr. Russell was one of the managers at the town office. Then follows: "Drillers to bale wells"; and such expressions as "small starting diameter," "wells with large diameter," "Englishman who is known to have done good work during the massacre period," etc., all of which even if true have absolutely no bearing on the case. Probably Mr. Mancho's new compressor is intended to dispense with drillers baling wells with large diameters.

From the manner which the criticism has been so vigorously attached, there is no concealing the fact that there is a wheel within a wheel, and that it is the work of a man with a proneness to seeing the mote in his neighbour's eye, as can be conclusively shewn by the number of his grammatical errors.

PRODUCTION OF THE BAKU OIL FIELDS.

STATISTICS FOR THE FIRST HALF OF 1906.

The total production of crude oil at the Baku oil fields during the first half of 1906, as we have already announced, amounted to 225,881,156 poods against 270,504,313 poods in the first half of 1905.

The production month by month was as under :—

	By Baling.	By Spouters.	Total.
January	29,451,040	4,793,300	34,244,340
February	31,083,029	54,500	31,137,529
March	38,605,963	146,500	38,752,463
April	40,120,604	1,382,000	41,502,604
May	41,723,874	352,640	42,076,514
June	37,929,554	234,900	38,164,454
Total	218,914,064	6,963,840	225,877,904
Total for first half of 1905	261,387,913	9,116,400	270,504,313

The production of the principal firms during the half year, compared with the corresponding periods in 1905 and 1904, was as follows :—

	Six Months, 1906.	Six Months, 1905.	Six Months, 1904.
Nobel Bros.	32,151,369	25,893,000	37,563,000
Caspian and Black Sea Society	17,440,455	18,073,000	27,905,000
Baku Naphtha Co. ..	19,868,764	13,902,000	13,045,000
Caspian Society	11,881,491	15,256,000	18,442,000
Moscow - Caucasian Co.	11,431,598	16,336,000	5,728,000
Mantascheff and Co. ..	11,025,623	20,410,000	22,915,000
Baku-Russian Petroleum Co., Ltd.	6,970,000	10,105,000	14,756,000
Zoubaloff	6,990,000	7,231,000	9,815,000
Russian Petroleum and Liquid Fuel Co. ..	6,392,084	10,496,000	14,615,000
Assadulaeff	6,252,955	—	—
Aramazd Co.	6,075,610	7,109,000	8,493,000
Nagieff	6,067,818	6,405,000	—
Pitoeff	5,880,100	7,939,000	5,796
Russian Naphtha Co. ..	5,715,030	8,822,000	—
Mirzoeff Bros.	5,676,785	8,277,000	7,762,000
Schibaieff Petroleum Co., Ltd.	4,868,395	5,969,000	8,109,000
Bibi-Eybat Petroleum Co., Ltd.	4,845,000	5,460,000	5,655,000
Ter Akopoff Co.	4,101,427	2,921,000	—
Naftalan Co.	3,780,335	4,568,000	—
Neft Co.	2,840,250	3,503,000	—
Shikhova Co.	2,616,786	2,551,000	—
Tiflis Co. (Bebe-Aibat) ..	2,578,820	4,468,000	—
European Petroleum Co., Ltd.	2,561,200	4,617,000	6,933,000
Kalantaroff & Co.	2,495,000	4,752,000	—
Rossijskoie Naphtha Co.	1,796,700	—	—
Kavkaz Co.	1,706,219	2,060,000	—

SIX MONTHS' GROSNY PRODUCTION.

The production of crude oil at the Grosny oil fields during the first six months of 1906 was as follows (in poods) :—

	Used as Fuel at the Wells.	Deliveries by Pipe Line.	Total.
January	583,636	3,424,916	4,018,552
February	483,766	2,425,596	2,909,362
March	506,971	3,614,923	4,121,894
April	448,649	2,276,371	2,725,020
May	486,198	2,851,445	3,337,643
June	234,881	2,186,248	2,421,129
Total	2,744,101	16,779,499	19,523,600

The productions of various firms was as under :—

	Poods.
Akhverdoff Co.	9,946,688
Spies Petroleum Co., Ltd.	3,213,199
Anglo-Russian Maximoff Co., Ltd.	2,540,012
Kasbeck Syndicate, Ltd.	1,316,840
North Caucasian Co.	1,217,865
Tcheleken-Daghestan Co.	533,366
Russian Standard Co.	434,884
Moscow Co.	242,884
Caspian and Black Sea Society	246,861
Grosny Oil Co.	198,778
St. Petersburg Co.	179,367
James MacGarvey	93,141
P. Kholodovsky	35,089
Vladicaucasian Co.	28,546

FRENCH PETROLEUM COMPANIES IN ITALY.

The *Financial Times* announces that the Petroli d'Italia proposes to absorb two oil boring companies which were formed by French capitalists in 1898. The first is the Pétroles de Montechino, which has a share capital of £48,000, and holds a concession on the northern declivity of the Apennines extending over about 10,000 acres. So far 28 boreholes have been sunk, and all of them yield petroleum. The second concern is the Société Française des Pétroles et Forages Artésiens, which also has a share capital of £48,000, and whose oil wells, which are likewise situated in the province of Piacenza, yielded 3,000,000 litres of petroleum in 1905. This company has erected a refinery near Fiorenzuola d'Arda, where it refines its own production of petroleum as well as that of the Pétroles de Montechinio. The Petroli d'Italia is to increase its share capital to £600,000 for the purpose of absorbing the two French undertakings, and hopes are expressed that the output of petroleum will be so augmented as to meet the entire requirements of Italy.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO AUGUST 13th, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since July 30.	From Jan. 1.	Since July 30.	From Jan. 1.	Since July 30.	From Jan. 1.	Since July 30.	From Jan. 1.	Since July 30.	From Jan. 1.	Since July 30.	From Jan. 1.	Since July 30.	From Jan. 1.	Since July 30.	From Jan. 1.
Austria ..	—	876,640	8,120	366,890	—	71,930	—	—	—	—	—	—	—	—	8,120	1,326,460
Belgium ..	—	370	15,560	300,150	—	11,000	—	—	—	5,300	—	—	—	2,486	15,560	308,306
Borneo ..	—	210	—	—	—	—	—	—	750,200	5,238,250	—	240	—	—	750,200	5,238,700
Canada ..	—	—	—	12,800	—	32,400	—	—	—	—	—	—	—	—	—	45,200
Germany ..	6,540	2,932,330	59,350	922,840	—	—	—	—	—	2,380	—	—	—	6,290	65,890	3,874,320
Holland ..	—	9,740	1,270	2,870	—	—	—	—	169,070	1,290,780	—	271,000	6,000	51,040	176,340	1,624,950
Roumania ..	592,500	3,155,675	—	—	—	—	1,035,880	432,600	1,024,580	—	—	—	—	—	1,025,100	5,216,135
Russia ..	829,600	22,236,170	3,400	2,535,540	—	—	1,604,250	—	—	5,050	—	—	—	5,660	833,000	26,386,670
Sumatra, &c ..	—	—	—	—	—	—	—	—	—	976,500	—	—	—	—	—	976,500
U.S.A. ..	567,130	56,762,527	2,026,720	27,239,724	—	533,553	3,664,600	29,597,840	3,240	6,844,200	—	9,047,730	15,320	1,078,560	6,277,010	131,094,044
Other Countries	—	1,370	3,090	27,200	—	—	—	—	250	730	—	—	130	213,530	3,470	242,830
	1,995,770	85,975,032	2,117,510	31,408,014	—	648,883	3,664,600	32,237,970	1,355,360	15,387,770	—	9,318,970	21,450	1,357,566	9,154,690	176,334,115

MISCELLANEA.

THE PANAMA PIPE LINE.

LATEST INFORMATION.

The announcement made in the last issue of our contemporary to the effect that the Union pipe line across the Isthmus of Panama was ready for operation, was inaccurate. As a matter of fact, in spite of every effort having been put forward to get the line completed in the specified time, this has been found impossible. The result has been that an extension of time has now been granted the company, this being until the middle of September. The delay in the completion of the pipe has been due to the fact that connections for pumps, boilers and other necessary apparatus has been slow in reaching the isthmus on account of the San Francisco disaster, which, of course, dislocated commerce on that side of the American Continent.

PRODUCTION AT THE BAKU OIL FIELDS.

GREAT DECREASE.

According to latest advices from Baku, it appears that the output of crude oil at the Baku oil fields during the first half of July amounted to only 8,500,000 poods. The figures for the corresponding period in June were about 20,000,000 poods.

GREEK GOVERNMENT TENDERS FOR CASES OF PETROLEUM.

The Commercial Intelligence Branch of the Board of Trade has received from His Majesty's Consul at Piræus copy of a notification by the Greek Government, calling for tenders for 65,000 to 70,000 cases of petroleum for the State Monopoly. Sealed tenders may be sent, up to the 14th September, to the Ministry of Finance, Section of Monopolies and Mines, Athens.

Enclosed with the tender must be a receipt shewing that the sum of 40,000 francs (gold), or £1,600, required as a guarantee, is deposited at the Greek Treasury in Athens, or at the National Bank of Greece.

AUSTRIAN PETROLEUM EXPORTS.

According to official statistics just published, there were exported altogether from Austria-Hungary during the first quarter of 1906 47,833 tons of petroleum products, which is nearly 5,000 tons more than in the corresponding period of 1905. Out of this total 535 tons were crude oil, 35,481 tons illuminating oil, 2,599 tons of benzine and other light oils, 9,218 tons lubricating oils, and the remainder other products.

Among the countries to which Austrian petroleum products were exported Germany comes first with 20,343 tons (including 16,456 tons of illuminating oil), next came France with 5,916 tons (4,975 tons illuminating oil), and Switzerland with 5,255 tons. Especially noteworthy is the increase in the exports of benzine.

During the same period there was, on the other hand,

imported into Austria-Hungary 8,614 tons of petroleum products, of which 3,146 tons were Roumanian crude oil admitted at a reduced import duty, 2,796 tons refined light oil, 1,712 tons lubricating oil (chiefly from the United States), and 557 other heavy products. Of particular interest is the import of 2,789 tons of lubricating oil.

BATOU PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum for the week ended July 22nd, 1906 (o.s.):—

	Illuminating oil.		Other products.	
	1905.	1906.	1905.	1906.
To Europe	524,000	—	163,000	21,000
To the East	—	12,000	—	—
To Russian Ports	—	—	4,000	—
From Jan. 1st to				
July 22nd:—				
To Europe ..	13,222,000	8,358,000	5,470,000	4,511,000
To the East ..	8,118,000	2,506,000	297,000	32,000
To Russian Ports	1,849,000	1,932,000	120,000	136,000

GALICIAN PETROLEUM PRODUCTION DURING JUNE.

The production of crude oil at the Galician oil fields in June was as follows (in tons):—

Field.	Production.	Deliveries.	Stocks on 30th June.
West Galicia—			
Potok	1,290	615	7,089
Rogi	855	2,318	9,028
Rowne	133	197	222
Tarnawa-Wielopole-Zagorz	1,781	1,832	3,942
Krosno	3,170	6,142	12,069
Other fields in West Galicia	2,880	2,678	10,656
East Galicia—			
Boryslaw-Tustanowice	46,100	56,047	375,444
Schodnica	4,120	4,757	34,211
Urycz	1,240	1,482	15,119
Mrzwnica	120	173	1,484
Other East Galician fields	950	800	240
Total	62,639	77,041	469,504

During June the total stocks of crude oil at the oil fields further declined from 486,095 tons to 469,504 tons, or by 16,591 tons. At the Boryslaw-Tustanowice field, taken separately, the stocks shew a decline during the month by 11,350 tons.

The quantities of crude oil used as fuel at the wells or lost by leakage, etc., during the month amounted to 2,100 tons, of which 1,400 tons was at Boryslaw-Tustanowice.

ITALIAN PETROLEUM.

Writing in the *Financier* from Rome, that journal's own correspondent mentions that the north of Italy produces a good supply of petroleum of excellent quality, and now there is an Italian-Roumanian Society which will be able to give Italy all the petroleum she may require. The contract has been signed, and the affair is doubtless destined to a great future. If Italy is able to substitute petroleum for coal, then this society will become a little Standard Oil Co., with consequences which we can scarcely foresee as yet. This is as good and disinterested a guide to Italian values as has been hitherto met with, and may prove useful to intending investors.

JAPAN'S PETROLEUM TRADE IN 1905.

In the annual report of Mr. Crowe, the Commercial Attaché to H.M. Embassy at Tokio, upon the trade of Japan in 1905, reference is made to the petroleum trade during the period under review. It appears that the imports of kerosene for the past year shew a very considerable decline, more especially in case oil. The figures were:—

Year.	Case Oil.		Bulk Oil.	
	Quantity. Gallons.	Value. £	Quantity. Gallons.	Value. £
1905 ..	41,598,051	889,000	17,105,248	341,000
1904 ..	63,174,439	1,489,000	18,497,362	369,000

Over 36,000,000 gallons of case oil were from the United States, there being a large falling off both in American and Russian oil, while the bulk oil came in almost equal quantities from Borneo and Russia.

The decrease is to a great extent due to the competition of the native oil fields whose progress has been very marked, and to a lesser extent to the unsettled state of affairs at Baku.

The figures for the production in Echigo are as follows:—

	Quantity.		
	1904. Cases.	1905. Cases.	Increase. Cases.
Hoden Company ..	720,000	960,000	240,000
Nippon Company ..	480,000	600,000	120,000
International Company.	120,000	240,000	120,000
Various Companies ..	240,000	960,000	720,000
Total ..	1,560,000	2,760,000	1,200,000

This advance of the native oil industry was doubtless greatly assisted by the extra war duty of 20 sen per 10 gallons, which came into force on July 1st, 1905, making the total duty 96 sen per case of 10 gallons. This duty was imposed equally on case and bulk oil, and is therefore considerably to the advantage of the former, as in this way the case and tins both come in duty free:—

	Price per Case.			
	Highest. Yen. Sen.		Lowest. Yen. Sen.	
American "Chester" ..	3	50	3	31
Tank oil ..	2	69	2	20

REDUCTION OF THE RUSSIAN EXPORT RATE FOR KEROSENE.

The conference formed at St. Petersburg to consider the question of reducing the export railway rate for kerosene on the Transcaucasian Railway has declared itself in favour of a reduction as a temporary extraordinary measure. In view of the great importance of the question, before its final decision by the Tariff Committee, it will be considered by the Council of Ministers. The conference which was sitting at the Ministry of Finance consisted of representatives of five Governmental Departments. The representatives of the Ministry of Commerce and Industry, the Ministry of Lands and Agriculture, and the Ministry of Finance declared themselves in favour of reducing the export rate, whilst the representatives of the Ministry of Communication and of the State Control Department declared themselves against any such reduction.

ROUMANIAN PETROLEUM EXPORTS IN JUNE

The exports of petroleum products from Roumania in June are given below (in tons):—

Destination.	Crude oil, distillate, gas oil, etc.	Illum. oil.	Benzine.	Total.
France ..	201	9,540	3,404	13,145
Italy ..	—	8,781	—	8,781
Germany ..	123	2,210	1,633	3,966
Belgium ..	—	3,629	—	3,629
Turkey ..	66	1,904	—	1,970
Austria-Hungary ..	1,469	—	—	1,469
Belgium ..	85	104	18	207
Total in June, 1906 ..	1,944	26,168	5,055	33,167
" " 1905 ..	2,218	8,901	3,609	14,728

The total exports during the first half of 1905, compared to 1905, according to statistics published each month, were as follows:—

	1906.	1905.	Increase or decrease in 1906 against 1905.
January ..	13,851	7,833	+ 6,018
February ..	14,369	14,313	+ 56
March ..	33,023	12,663	+ 20,360
April ..	11,608	18,536	— 6,928
May ..	45,296	17,761	+ 27,535
June ..	33,168	14,729	+ 18,439
Total for 6 months	15,1315	85,835	+ 65,480

The increase in exports from Roumania in the first half of 1905 over the corresponding period of 1905, as shewn in the above table, amounted to 65,480 tons, or about 60 per cent. The record monthly figure of exports was the one in last May, namely 45,296 tons.

LATEST FROM BORYSLAW AND TUSTANOWICE.

Early in July the "Zuzia" well drilled by Mr. H. Wichauski at a depth of 899 metres, began to spout, yielding on an average 100 tons of crude oil daily. This well was productive in June, during which month it produced 1,860 tons. On the other hand the "Germania" well belonging to the same company, and situated at a distance of only 300 metres from the "Zuzia" well, has not yet become productive, although it has reached a depth of 1,055 metres.

The recently completed "Bauzay" well yields approximately 60 tons per day. The Litwa No. 1 well, which in its turn produced 100-120 tons daily, and the output of which fell largely, has again been deepened. It has now a depth of 983 metres, and produces about 50 tons of crude oil daily. The Karpathen Co. has recently struck oil in their Dombrowo well, with a daily yield of about 10 tons.

At Boryslaw, on the Scott-Trzebinia property, on the "Na Kreisbergu" plot, an oil was struck in a new borehole, which began with a production of 30 tons daily. Messrs. Fauck and Co. have again succeeded in obtaining a spouter from their "Bianca" well, on the Mrazinca Road. The yield of this well has not yet settled down: one day it produces 50-60 tons, falls on the next day, only to rise again on the following day.

The Petroleum District of Beaver County, Pennsylvania.

A survey has been recently completed of the petroleum district of Beaver county, Pennsylvania, by the United States Geological Survey, in order to ascertain whether the productivity of this high grade producing district is practically exhausted. The survey was entrusted to Mr. Lester H. Woolsey, who has now put forward some interesting suggestions as to future developments.

The Beaver quadrangle, it should here be pointed out, is located in Western Pennsylvania, its western boundary being about one mile from the Ohio State line. Its whole area lies in Beaver county, except a triangular portion in the south-east corner, which is in Allegheny county. Ohio River flows through the middle of the quadrangle in a general westernly direction, and near the town of Beaver, which gives its name to the quadrangle, receives from the north its chief tributary, Beaver River. The quadrangle has an area of about 227 square miles.

In its physiographic and geologic relations this quadrangle forms a part of the Appalachian province, which extends from the Atlantic Coastal Plain on the east to the Mississippi lowlands on the west, and from Central Alabama to Canada.

With respect to the topography and the attitude of the rocks, the Appalachian province may be divided into two nearly equal parts by a line which follows the Allegheny front throughout Pennsylvania, Maryland and West Virginia, and the eastern escarpment of the Cumberland plateau across Virginia, Tennessee, Georgia and Alabama. East of this line the rocks are greatly disturbed by faults and folds, while west of it they are less disturbed and lie nearly flat, the few folds which break the regularity of the structure being so broad that they are scarcely appreciable. Immediately east of the dividing line roll the alternating ridges and valleys which have been designated the Greater Appalachian Valley, and still further east stretches a slightly dissected upland known as the Piedmont Plateau. West of the line extend broad plateaus, unbroken save by a few ridges where minor folds have affected the rocks, but greatly dissected by streams. In contradistinction to the lowlands of the Mississippi Valley on the west and the furrowed highlands of the Appalachian Valley on the east, this part of the province has been called by Powell the Allegheny Plateaus. The Beaver quadrangle lies entirely within this plateau region.

Oil has been produced in this territory for about 45 years. During that period several pools have been opened and practically drained. These are in the Smiths Ferry, Shannopin and Hookstown fields. Few large wells, however, have been secured in the Beaver quadrangle in recent years, and the production is now waning.

The Smiths Ferry field was the first discovery in this area. Long before 1860, it is understood, oil oozed out on the Ohio River, and was subsequently found in the Pottsville sandstone. This led to deeper drilling and the famous Berea sandstone, locally known as the Smiths Ferry sand, was reached, and produced large quantities of oil in the eighties. Indeed, some of these wells are still pumped, but most of them have been abandoned. In recent years the field has been extended eastward to the head of Wolf Run, and many profitable though not large wells have been found.

The Shannopin field lies near Shannopin, on the Ohio River, and extends westward across the south-east corner of the quadrangle. The first wells which tapped that part of the pool lying within this area were drilled about 1883, but large wells did not come in before the fall of 1886. Thereafter the field became prolific, some wells producing from 400 to 2,000 barrels per day; but in 1889 it began to wane, and at present, though some wells are still pumped, no new wells are being drilled. The oil-bearing stratum in this field is the Hundred-foot sand, locally named Shannopin sand, which occurs 200 to 300 feet below the Berea, and also produced the New

Sheffield gas pool. It is interesting to note that the upper portion of this bed is hard, siliceous and perhaps impervious, while the lower part, or "pay," is an open, mealy or pebbly sand.

When the Shannopin field began to wane, in 1889, the Hookstown pool was first opened, though unsuccessful drilling had been previously done on its borders. The wells in this pool had never been large producers, probably none yielding over 200 barrels per day. The old field is gradually weakening, but in 1901 some excitement was aroused by the advent of a few 50-barrel wells about a mile north of Hookstown. The producing sand of the field is the Berea (Smith's Ferry sand), and the "pay," which is usually found 5 to 10 feet below the top of the sand, is an open, mealy rock. When the entire stratum is close and compact it is barren.

Gas has been produced in the Beaver quadrangle in considerable quantities for about 20 years, and the wells have included several of exceptional volume and pressure. The most productive field lies in the vicinity of New Sheffield and extends south-westward through Independence and Hanover townships.

The New Sheffield pool was the largest and most important gas field in the quadrangle. Profitless testing had been carried on previous to 1884, but this field was first opened in the summer of that year, and during the following three years most of the wells in this field were driven. Many wells gave an initial rock pressure ranging from 500 to 600 pounds and a minute pressure of 250 to 480 pounds. After two years these pressures still remained between 350 and 450 pounds and 215 and 375 pounds respectively. At this time, however, the Shannopin oil pool was opened, and the escaping oil rapidly reduced the pressure of the gas. At present this field is practically abandoned, and few, if any, wells are put down. The gas from this district comes from the Venango oil sands, particularly from the Hundred-foot sand, which is also the productive stratum of the Shannopin oil field.

Many scattered wells have been drilled for gas or oil at several localities in the quadrangle. Those put down to the Berea at Georgetown and two miles to the east along the river have been uniformly of little value or dry. At Industry much salt water was encountered at 310 feet and a show of oil and gas in the Berea, and at the mouth of Raccoon Creek a few barrels of oil were taken from the Hundred-foot. Wells of Monaca and Rochester once provided gas for the tumbler works, together with small amounts of oil, while those near the mouth of Brady Run furnished a little gas with a trace of oil, but the chief product was salt water. Still other wells at Beaver Falls formerly gave sufficient gas for forging and tempering cutlery. A few wells two miles east of New Brighton, others north of Big Traverse Creek in the Hundred-foot, and some near Brush Run in the Berea, were, so far as known, at least unprofitable and probably dry.

The above facts in regard to oil and gas pools in this area, studied both by themselves and in relation to geographic distribution, are confirmatory of well-known geologic principles. They shew that pools of oil or gas when tapped begin to wane after a few years of constant production and finally become unproductive except for a few pumping wells. This is apparently due both to the exhaustion of supply and to the resulting loss of pressure. In regard to the producing sands, it is seen that the same stratum is not the producer in all fields. Several causes may be brought forward to explain this:—The sands are no doubt more or less lenticular, and may, therefore, be present in some localities while absent in others; or when present they may be too fine and compact to contain oil and gas in paying quantities; or though coarse and open, these products may never have reached them or remained in them, as will be noted below. This brings us to the discussion of a third

clusion, a marked relation between the distribution of all oil and gas and the structure of the rocks. A study of the structure with regard to the position of the oil and gas fields of this quadrangle shews that the Hookstown field lies on the sides of an arch near Mill Creek, the Smiths Ferry pool on the flanks of the Fairview dome, and the Shannopin field for the most part on the limb and bottom of a shallow syncline, with the New Sheffield gas pool above it on the steep side of a flat anticline. Relations like those at Smiths Ferry and Hookstown were recognised by operators and geologists and have been formulated in which has become known as the anticlinal theory regarding the occurrence of oil and gas. Salt water is often associated with oil and gas in the same area, and these three products are known to have among themselves a definite relation of occurrence. That relation seems to depend on their respective densities, according to which they apparently arrange themselves in the containing stratum. On the flank of a syncline or anticline, therefore, salt water should occur lowest of the three, then oil, then gas at the top. Oil probably rests upon the surface of a denser liquid, salt water, when present, and gas upon oil. Gas being very much lighter than oil, may occupy the entire inclosing stratum except where the closeness of the sand or a bend in the rocks forbids further expansion. The height of the salt water and the consequent position of the oil on the flank of an anticline are said to depend on the amount of water present. If the sand holds much water, oil should occur high on the flank; if little water, low on the flank; if none, near the bottom of the syncline.

It therefore follows that if a well is driven for oil and salt water is struck, the well should have been drilled structurally higher up. Also, if gas is found, oil may be struck by drilling structurally lower down. Finally, all things being equal, gas seems likely to occur in the summits of domes and anticlines. That oil follows the water line in this region has not been definitely proved. In some sands it is believed that it does, but in others this fact is not clear from the information at hand. In the case of the Berea, oil probably follows the water line, but in the Hundred-foot little or no water seems to be present in this area. By bearing in mind these general relations between structure and product and between the products themselves, which have been worked out by I. C. White, Orton, Griswold and others, not only may new fields be found out, but intelligent prospecting for gas or oil may also be carried on. With regard to oil in the Berea, the area north of Ohio River between the 940 and 1,040-foot structure contours, and between the eastern extension of the Smiths Ferry field and Brandy Run seems a promising one. In this area the southward-pointing structural spur just east of Six-mile Run may be the most favourable spot. The territory lying south-east of Hookstown, near or below the 1,180-foot contour, and extending from half-a-mile from the western edge of the quadrangle eastward along Service Creek, should also be tested. The westward extension of the Shannopin field in the Hundred-foot between the 980 and 1,020-foot contours may possibly be found in the synclines at the mouths of Little Service and Little Traverse runs. Some dry holes, however, have been put down on the intermediate anticline.

As to gas, prospect wells on the summits of the domes of the central dome-basin region from McCleary to Monaca might bring good results, though no great yield should be expected. The structural spurs radiating from these domes may also contain gas, especially those from the McCleary dome toward the New Sheffield gas pool. If gas be found in the domes and spurs, judicious drilling to the Berea on the sides of the domes might tap small oil pools. The dome at the head of North Branch of Brady Run should also be tested for gas. In general, if salt water is found in any well, oil may perhaps be found structurally higher—that is, at the salt water level—and gas still higher up, above the oil line. When the salt water limit has been established it should in general be followed at nearly the same structural elevation in the same basin unless disturbed by the condition of the sand.

AMERICAN NOTES

An Old Merger.—The Wyandot Production Co., with its refinery at Carey and the Cleveland-Scranton Oil Co., in Hancock county, have filed articles of incorporation, under the name of the Wyandot Refining Co.

Canadian Oil Strike.—We learn that a good flow of oil has recently been struck on the farm at Port Bruce, Aylmer, Canada. The oil was met at a depth of only 180 feet. It is said that a great deal of this land is in the hands of Pittsburg capitalists.

Latest from Humble.—Despite the bringing in of new wells in the Humble district, the production continues to decrease, and the daily estimate for July was 12,500 barrels as against 14,000 barrels for the preceding month. During the month over 50 wells were completed, of which 40 were producers.

Another Chanute-Humboldt Pipe Line.—The Prairie Oil and Gas Co. is busy with its new Chanute-Humboldt pipe line. This new line will be the largest of the four, the first having been only a six-inch pipe. A second was laid of eight-inch diameter, but this was found insufficient; then a third pipe was laid, and now a fourth.

An Old Time Gusher.—What reminds one of the old time gushers has been recently struck in Tyler county, says a despatch from Pittsburg. The well is situated on Buffalo Creek, in the Mannington district, and its production of 100 barrels per hour compares very favourably with the big wells found in West Virginia years ago.

Purchase by the Prairie Oil and Gas Company.—The Prairie Oil and Gas Co. has recently closed a deal for the purchase of 80 acres with production in Prairie's Berger, Cleveland. There are at present three wells on the property, and a fourth is now being drilled. Although the three wells were drilled prior to February, 1905, they are still making 150 barrels daily.

In Kentucky.—It is reported that a great deal of wild cat work is being carried on in Kentucky, in the hope of striking either oil or natural gas. The most successful well tapped during the past few weeks has been in Lee county, where a gas well has been brought in, which is now doing 3,000,000 cubic feet per day. During July, the Kentucky-Tennessee field produced no less than 120,000 barrels of oil.

More Tests at Bryan Heights.—A number of Houston capitalists have acquired leases in the southern part of Brazoria county, including part of Bryan Heights, and development work will commence early in October. Bryan Heights is situated about three miles south of Velasco, and is one mile from the Gulf Coast. According to the Geological Survey reports, seven wells have previously been drilled in this district.

Spindle Top.—The latest news from this once famous centre of production is to the effect that there is much activity in drilling, and at the present time seven wells are going down. During the past month four wells were completed, and all these were producers, yet their total production was not quite a set off with the natural falling off of the old wells, so that a slight decrease has to be recorded in the total production which is now placed at 2,600 barrels daily.

The Amalgamated Oil Company of Canada, Limited.—The first annual meeting of the stockholders of the Amalgamated Oil Co. of Canada was held at Petrolia a few days ago. The affairs of the company proved to be in a satisfactory condition. The properties comprise 400 oil wells in addition to a number of pumping plants, all being valued at over \$100,000. In addition, however, the company has over 200 acres of territory in the Tilbury field which is producing very good wells.

The Mid-Continental "Oil Flood."—Speaking of the enormous increase in the production of the Kansas and Indian Territory fields, the *Oil Investors' Journal*, in its current issue, says: The Prairie Oil and Gas Co. is apparently doing everything in its power to handle the flood of oil that has been running for the past year. Its efforts to take care of the output is attested by the fact that a 35,000-barrel steel tank has gone up practically every day for several months. Pipe lines are laid in all directions to reach the oil, and the end is not even in sight. The possibilities of the Mid-Continental region are incalculable.

OUR AMERICAN LETTER . .

From the . .
"Review." . .
Correspondent.



PITTSBURG, PA., August 6th, 1906.

The development of the Illinois territory continues to be the chief topic of conversation among oil men, and though the most recent accounts are not so glowing as those received a few weeks ago, it is evident that the field is still receiving the undivided attention of operators. The drop in activity is not due to the lack of territory to drill, but the excitement and gushers being found in the field to the south have taken away the present interest to such an extent that many of the operators are now in that end of the field making an effort to join the producers there in the hunt for crude. The Union township pool has been one of the best found in the state, and has the largest amount of good oil sand of any of the pools yet opened up. The new wells drilled in of late do not shew the large production that the early wells did, which shews that the producing rock is being drawn upon very heavily. The pool, as it now stands, covers an area of three miles wide by about the same in length, and contains within this area a very fine production, which has made a large amount of money for the favoured ones, and the pool is still extending toward the north and east, and it is only a question of time until a connection will be found between the pool and the one in Parker and Westfield townships in Clarke county.

In experimental work Ritchie county is coming to the front. The salt sand territory has been furnishing a few good producers, and the small outlay required to develop the territory makes it an inducement to continue development work and stimulate the search for new producing territory.

In the shallow sand territory there is more new work starting than at any time during the year. The most of it is in the old fields, but the hope of finding new pools has not been entirely abandoned. Except for the new work starting by the various gas companies there is no noticeable increase in new work in the deep sand districts.

South-west of the Rowells run pool, in Calhoun county, operations are not as active as was expected when the producing lines were advanced into Roane county. The late wells have come in fair producers, but the developments lack the aggressiveness that usually characterises the discovery of an extension of such promise.

Near Harrisville, in Lincoln county, far in advance of any production, the Border Oil and Gas Co. has completed a wildcat that failed to find oil or gas in any of the formations down to and through the Big Lime.

The Wellsburg field, in Brooke county, has been furnishing better producers recently than any other Berea grit development. Some of the best wells have started at better than 100 barrels a day. The producing streak is very narrow, and a location from the north-east and south-west line is very likely to result in a failure.

The chief topic of interest among operators and producers in the Mid-Continental fields is the two-cent drop in the price of crude oil. After remaining stationary for over a year, the decline, although small and felt but little, naturally causes a feeling of uneasiness as to a further decline. Many Oklahoma producers have realised for some months that with the surplus crude oil in sight, 52 cents was an outside figure, considered as a business proposition, and have freely admitted that a lower price would be a logical conclusion. While the drop is resented by some producers, if it has the effect of curtailing production it will be accepted as

one of the necessary features of the oil business. Increasing stocks are bound to squeeze the market to a normal basis, and there is now no doubt among well informed producers that the Illinois and Oklahoma fields have made good any shortage that may have been anticipated a year ago, and can take care of any demand the near future may make. Drilling in Oklahoma has already dropped off 40 per cent., with the prospect of further curtailment during August, and the falling market will have a tendency to cinch it. Legitimate producers can see no other way to check the steadily increasing surplus.

July in the Kansas field was as like June as two peas in the same pod. The number of completions was the same—73—with one more dry hole, and two more gassers, while one well less was drilling on July 31 than on June 30. New production fell 93 barrels short of the June output. The monthly reports have not varied for 15 months, and there is no likelihood that the future for some time will shew any change. A dozen producers in Miami, Franklin and Neosho counties, have been doing all the drilling for oil in the shallow end of the Kansas division, while Wilson and Montgomery counties are looking for gas. Chautauqua county producers are simply trying to hold production up.

A new gusher production has now to be reckoned with for a time in the Creek nation, the now southern limit of the Mid-Continent fields. Just how extensive the development will be is rather uncertain, but enough is in sight to make sure of making it the most productive area yet opened in the west. In June the Creek division reported 20 completions; 1,308 barrels new production, and 36 rigs and drilling wells. July closed with 20 completions; 4,520 barrels new production, and 35 rigs and drilling wells. A number of wells are shut down on the sand waiting for pipe line connection to the Glenn pool, where the gushers are. The present production of the completed wells there is 8,000 barrels a day, with 10 wells on the sand and 12 wells drilling. As they are all practically inside the proved line, the daily production will probably be doubled if they were drilled in. The two-inch line is taking 1,200 barrels a day, and the eight-inch line, when completed in a few days, cannot handle over 5,000 barrels a day, so there is likely to be a bad congestion. Some of the last wells completed have a pressure of 700 to 800 pounds and flow to 1,200 to 1,600 barrels in 24 hours. An area of two miles north and south and a mile wide has been proved, with no dry holes except on the east. Almost every tract is leased for some miles in every direction, and when contests are settled and leases approved there will be a chance for considerable development.

As I write, with about 13,000 completed oil and gas wells and dry holes, Oklahoma can furnish 100,000 barrels of crude oil a day, with an assurance that the production could be increased to 150,000 barrels a day if there was a demand for that much. The Illinois fields are of the same general character as to quality of oil and capacity of wells, and it is a reasonable estimate that that field could be pushed to 50,000 barrels a day, while the Oklahoma field was going to 150,000 barrels, but that contingency will hardly come. But the fact that the oil is there must be accepted as an important factor in all petroleum calculations. In one way it may be fortunate that the Government has imposed so many restrictions against Indian lands, for it is certain that a greater development would have resulted.

AMERICA AND PETROLEUM COUNTER- VAILING DUTIES.

The question as to the levying of countervailing duty upon petroleum products manufactured in countries which levy no duty upon American products, but which products are manufactured from Russian crude oil is at present exercising the minds of the officials of the Treasury Department at Washington, and causing much interest to be centred in the matter in America. It appears that the Treasury Department has decided to direct an appeal from the decision of the Board of General Appraisers, in which it has recently been held that paraffin manufactured in Great Britain from Russian petroleum is free of countervailing duty for the reason that, although Russia levies duties on both crude petroleum and paraffin, Great Britain, the country in which the paraffin was manufactured, levies no such duties. In a letter of instructions to the collector at New York, it is stated:—

The department is in receipt of a decision by the Board of General Appraisers, dated the 23rd inst., involving the dutiable classification of paraffin manufactured in countries other than Russia from crude petroleum, a product of Russia.

In view of the importance of the issue you are hereby directed to file an application for review of said decision of the Board of General Appraisers, in accordance with the provisions of section 15 of the customs administrative act of June 10, 1890. Pending final determination of the issue you will be guided in the classification of such importations by department's instructions of July 12, 1904, and of March 2nd, 1906.

The recent decision of the Board of General Appraisers, for the review of which the collector at New York has been directed to make application, is based upon the board's interpretation of a decision of the United States Circuit Court of Appeals in the case of the United States *v.* Downing. The board construed this decision in the following terms:—

“The Circuit Court of Appeals holds that the intention of Congress in the enactment of this proviso, and hence the proper construction of the law, is that crude petroleum when imported shall pay such duty as is paid upon it in the country wherein it is produced, and whenever any of the products of crude petroleum are imported they shall pay a duty equal to that imposed upon like products in the country where such products are produced. In other words, crude petroleum imported into the United States from Russia (a country charging a duty upon the petroleum of the United States) shall pay such a duty as is levied in Russia upon the petroleum of the United States; but paraffin manufactured in Belgium (where no duty is charged upon petroleum or the products of petroleum coming from the United States) from petroleum produced in Russia shall be admitted into the United States free of duty; while paraffin manufactured in Germany (where a duty is charged upon the products of petroleum coming from the United States) from petroleum produced in Russia shall pay a duty equal to that charged by Germany upon paraffin coming into that country from the United States.”

From this view, however, the Treasury officials sharply dissent.

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The American Oil Market.

New York, Week ended August 4th.

The event of special interest during the past week has been the reduction in the price of all grades of crude oil at the wells. On Saturday of last week came the unexpected announcement of a reduction of 3c. per barrel on the Pennsylvania grades and 2c. on the Lima grades. This took the producers completely by surprise, as they had confidently counted on an early advance, owing to the decreasing production of the higher grades of oil. They had scarcely ceased speculating as to the cause for the cut when, on Thursday last came the announcement by the purchasing agencies of another reduction of the same amount. Probably the second reduction caused less surprise than did the first, as the operators had come prepared for unwelcome news of this sort, having had time to study the conditions influencing the purchasing agencies. The new production of the Illinois field during July amounted to fully three-fifths of the total new production east of the Mississippi, and this of itself is regarded as sufficient to warrant the cut in prices. The new production in Illinois is about 15,000 barrels per day, says the *Oil, Paint and Drug Reporter*, and that of the older producing States, Pennsylvania, New York, West Virginia, Ohio and Indiana, about 10,000 barrels per day. It is apparent, therefore, that Illinois has become an important factor in the situation, and, as it is yet uncertain to what extent the production in that State can be increased, there is well-grounded fear that further reductions in price may follow. Reports from the producing regions during the past week shew fewer completions, and several large wells have been brought in, but for the most part the results have been unsatisfactory, most of the wells being small pumpers, and the percentage of dry holes shewed no improvement. In the Mid-Continent fields the production shews some falling-off, but an increase will doubtless follow with increased shipments or as stocks become less burdensome. From Texas the reports shews no change.

REFINED AND PRODUCTS.—On Saturday of last week a decline of 10 points was announced in the price of refined for export, and it was the general belief that this would result in an increased demand from abroad, but thus far it has had no such influence. The decline, coming simultaneously with the reduction in the price of crude, caused considerable surprise, as it was entirely unexpected. On Thursday last a further cut of 10 points was made, making a reduction of 20 points, or one-fifth cent per gallon, within a week. The general impression appears to be that this reduction was made to stimulate the foreign demand, but cables since shew the prices of refined in England are firmer, while the competition is less keen. Conditions abroad, are more favourable, however, as the situation in Russia is growing more serious daily, and shipments have practically ceased. The total engagements of refined for export during the past week foot up about 175,000 barrels, all for shipment in bulk.

The price for barreled oil has been reduced to 7.60c. for New York loading, and at 7.55c. for Philadelphia loading. The principal foreign markets are firmer. Freight rates are firm at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel.

Cases for export have been in good request, and sales of about 300,000 are reported. The price of plain tops has been reduced to 10.10c. Freight rates are firm.

Crude for export has been in fair request, and sales of about 40,000 barrels are reported. Pennsylvania crude is quoted at 7.60c. in barrels.

Crude naphtha continues firm. For export, no sales have been reported.

CLOSING QUOTATIONS.

		CRUDE.		Week ended	
		July 28.	Aug. 4.	1906.	1906.
National Tran, Certificates	per bbl.	\$1.64@1.65	\$1.58@1.59		
Pennsylvania crude in bbls.	per gal.	7.75	7.60		
Pennsylvania crude in bulk	.. ..	4.70	4.50		
Residuum, bbls. for export	.. ..	6@6½	6@6½		

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Aug. 4. 1905.	Aug. 4. 1906.
Tiona .. ..	.. ..	1.42	1.68
Pennsylvania .. ..	.. ..	1.27	1.58
North Lima .. ..	.. ..	0.86	0.94
South Lima .. ..	.. ..	0.81	0.89
Indiana .. ..	.. ..	0.81	0.98
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.26	1.37

REFINED—FOR EXPORT.

		Week ended	
		July 28.	Aug. 4.
Cargo Lots for export..	per gal. ..	7.80	7.60
In bulk .. ..	.. ..	4.70	4.50
Philadelphia loading ..	.. ..	7.75	7.55

REFINED IN CASES—IIO FIRE TEST.

		Week ended	
		July 28.	Aug. 4.
5,000 to 10,000 .. ..	.. ..	10.35	10.15
1,000 to 5,000 .. ..	.. ..	10.50	10.30

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		July 28.	Aug. 4.
120 fire test, S.W. ..	per gal. ..	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13	13
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	12½@13½	12½@13½

NAPHTHA AND GASOLENE.

		Week ended	
		July 28.	Aug. 4.
Naphtha, crude, car lots, 68 @ 72 deg.	.. ..	—	—
Gasolene 86 deg. .. ..	.. ..	22.00	22.00

PENNSYLVANIA OIL RUNS from July 27th to Aug. 2nd were:—July 27th, 74,691; July 28th and 29th, 131,524; July 30th, 34,996; July 31st, 94,233; Aug. 1st, 80,793; Aug. 2nd, 73,416. For the month of June, 2,245,234.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—45,924; 105,084; 59,677; 91,485; 36,534; 61,986. For the month of June, 2,136,814.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended August 3rd and from Jan 1, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	183,600	6,628,200	7,113,700
Refined, cases	280,000	9,090,000	13,662,000
Crude, barrels and bulk..	41,600	1,005,600	675,600
Crude, cases	23,000	250,000	152,000
Naphtha, barrels.. ..	—	240,300	347,000
Residuum, barrels	—	539,700	580,800
Lubricating, barrels ..	11,900	202,900	93,500
Total, barrels cde. eq. ..	435,318	14,191,607	16,134,630

CLEARANCES FOR THE WEEK.

During the week ended August 3rd, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	3,476,051	267,782,080	303,220,931
Crude	100	232,900	924,344
Naphtha	4,250	12,637,569	9,321,613
Residuum	—	3,613,000	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Aug. 3rd ..	4,634,835
Total from New York, from Jan. 1, 1906 ..	357,959,020
Same period last year	405,818,921
Decrease	47,859,901
From United States, week ended Aug. 3rd ..	12,897,764
Total from United States, since Jan. 1, 1906 ..	681,626,220
Same period last year	743,982,102
Decrease	62,355,882

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The "Review" Shipping List.

AUGUST 16, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE.	La Pallice ..	Philadelphia	L. Aug. 12	GUT HEIL	Philadelphia	Havana	L. Aug. 10
ALCHYMIST	Terneuse ..	Bordeaux ..	Arr. Aug. 12	HAINAUT (Dch.shp.)	Ibrail	Antwerp	L. Algiers, Aug. 8
AMERICAN	Honolulu ..	Philadelphia	Arr. Aug. 12	HARRY	La Plata....	St. Lucia ..	L. July 16
APPALACHEE	Yokohama ..	San Francisco	Arr. Aug. 1	WADSWORTH	Hamburg ..	Philadelphia	Arr. Aug. 5 & L. Aug 7 Christiana
APSCHERON	Antwerp	Batoum	P. Gibraltar, Aug. 13	HELIOS	Antwerp	New York ..	L. Swansea, July 29
ARAL	Hamburg ..	Tyne	Arr. Aug. 14	HOTHAM	San Francisco	Shanghai and Hankow	At Shanghai, about Aug. 8
ARAS	London	Blyth	Arr. July 30	NEWTON	—	—	Tr. on Lakes btr U.S. and Can.
ARGYLL	San Francisco	Honolulu ..	Arr. July 24	HOUSATONIC	Calais	Batoum	P. Gibraltar, Aug. 13
ASTRAKHAN	Philadelphia	Dover	P. Del. Break, Aug. 1	IMPERIAL	Rotterdam ..	Philadelphia	Arr. Aug. 9
AUGUST KORFF..	Philadelphia	Nordenham	P. Lizard, Aug. 15	JOANNIS COUTZIS	Pulo Samboe & Thameshaven	Batoum	P. Dunnet Hd., Aug. 10
AUREOLE	Manchester	Philadelphia	P. Eastham, Aug. 11	JAMES BRAND	Tyne	Antwerp	Arr. Aug. 15
AZOV	—	—	Trading on W.C. of South Amca.	KURA	Blyth	Philadelphia	P. Del. Break, Aug. 6
BAKU STANDARD	Philadelphia	Venice	P. Del. Break., Aug. 5	LA CAMPINE	Philadelphia	Ghent	At Terneuse, Aug. 15
BALAKANI	Hull	Philadelphia	Arr. Aug. 6	LA FLANDRE	Antwerp	New York ..	Arr. Aug. 9
BATOUM	Manchester	Port Arthur	P. Eastham, Aug. 9	LA HESBAYE	Antwerp	Genoa	Arr. Aug. 6
BAYONNE	New York ..	Hull	L. Aug. 2	LA MADALIENE ..	Gijon	Philadelphia	Arr. July 29
BEACON LIGHT..	Penarth	Del. Break..	P. Brow Head, Aug. 4	LA VIGUESA	Tyne	Philadelphia	Arr. Aug. 7
BEME	Rangoon ..	Calcutta	L. July 26	LACKAWANNA	Pauillac	Tyne	Arr. July 12
BLOOMFIELD	Bombay	—	At Suez, Aug. 13	LE COQ	Messina	Novorossisk	Cl. Constant'ple, May 5
BORJOM	Alexandria ..	Batoum	Arr. July 30	LOUTSCH	—	Philadelphia	P. Butt of Lewis Aug 10
BRILLIANT	Philadelphia	Gothenburg	L. Aug. 7	LUCERNA	Tyne	Philadelphia	Arr. Aug. 5
BROADMAYNE	Philadelphia	Rouen	P. Del. Break, Aug. 5	LUCIFER	Philadelphia	Rotterdam ..	Arr. Aug. 14
BULLMOUTH	Balekappan	Shanghai ..	Arr. Aug. 14	LUCIGEN	Cette	Kustendje ..	L. Aug. 14
BULYSESSES	Cardiff	Balekappan	P. Barry Island, July 11	LUMEN	Tyne	Philadelphia	Arr. Aug. 12
BURGERMEISTER	Tyne	Philadelphia	L. Aug. 13	LUX	Novorossisk	—	Arr. Malta, Aug. 11/12
PETERSEN	Philadelphia	Alicante	At Gibraltar, Aug. 14/15	MAKKAVEI	—	—	Trading in Black Sea
CADAGUA	Shanghai ..	San Francisco	Arr. Aug. 6	MANHATTAN	Kustendje ..	Savona	Arr. Aug. 9
CALCUTTA (Br. bq.)	Singapore ..	—	L. June 25	MANNHEIM	Philadelphia	Copenhagen	L. Aug. 11
CARDIUM	Philadelphia	Liverpool ..	Arr. July 12	MARGARETHA ..	Kustendje ..	Genoa	Arr. July 21
CAUCASIAN	and Cardiff	Amsterdam	P. Lizard, Aug. 15	MEXICAN PRINCE	Liverpool ..	Porto Rico ..	L. July 31
CHARLOIS	Philadelphia	—	Aug. 11	MIRA	Muronan ..	Aroe Bay and Suez	L. Singapore, Aug. 9
CHESAPEAKE	London	Tyne	Arr. Aug. 11	MUREX	Madras	Rangoon	Arr. Aug. 13
CHESTER	Antwerp	New York ..	P. Scilly, Aug. 11	NARRAGANSETT..	New York ..	London	L. Aug. 5
CIRCASIAN	—	—	Trading on W.C. of South Amca.	NERITE	—	—	Tr. in China Seas
PRINCE	—	—	—	NEW YORK	Southampton	New York ..	190 ms. S.W. of Browh'd, Aug 12
CLAM	—	Samboe	Arr. Aug. 13	OCEAN	Amsterdam	New York ..	Sp. Aug. 10, 48 N, 41 W.
COL. E. L. DRAKE	London	Port Arthur (Texas)	P. Beachy Head, Aug. 15	ORANGJE PRINCE	Ensenada de Mora	Flushing....	Arr. Aug. 14
COWRIE	Batoum	—	L. Aug. 8	ORIELAMME	Rouen	Philadelphia	L. Aug. 4
CYMBELINE	Barry	Del. Break..	P. Brow Head, Aug. 15	OSCEOLA	Brunswick & Norfolk (Va.)	Rio Janeiro	P. Cape Henry, July 8
CZAR NICOLAI II.	Batoum	Hamburg ..	P. Tarifa, Aug. 10	OTTAWA	Philadelphia	Vera Cruz ..	L. Galveston, Aug. 3
DAGHESTAN	Tyne	Batoum	Arr. Constant'ple, Aug. 10	OURAL	Batoum	Dunkirk ..	P. Gibraltar, Aug. 15
DAKOTAH	San Francisco	Hong Kong	Arr. July 25	PALEMBANG	—	—	Tr. Sts. Settlem'ts & China Seas
DELAWARE	Philadelphia	Liverpool ..	P. Del. Break., Aug. 3	PAULA	Philadelphia	Oscarshamn	P. Del. Break, Aug. 5
DEUTSCHLAND ..	New York ..	Hamburg ..	Arr. July 27	PECTAN	Port Arthur (Texas)	—	P. Sand Key, Aug. 5
DIAMANT	Tyne	New York ..	P. Dunnet Head Aug. 10	PENNOIL	Tyne	Philadelphia	L. Aug. 12
ELAX	Tientsin	—	L. Aug. 11	PERLAK	Calcutta	Aroe Bay ..	L. June 6
ELISE MARIE	New York ..	Rotterdam ..	L. Aug. 7	PHOEBUS	Hamburg ..	New York ..	Arr. Aug. 13
ENERGIE	Philadelphia	Dantzic	P. Helsingborg Aug. 12	PINNA	Kustendje ..	Dover	P. Beachy Head, Aug. 15
ERIVAN	Philadelphia & Hamburg	London	Arr. Aug. 15	POTOMAC	Plymouth ..	Tyne	Arr. July 16
EUPLECTELA	Tyne	Philadelphia	P. Prawle Pt., Aug. 9	PROMETHEUS ..	New York ..	Rotterdam ..	L. Aug. 8
EXCELSIOR	—	—	Coasting Peru L. Aug. 11	PRUDENTIA	Rouen	Middlesbro'	Arr. July 24
EZIO	Tarragona ..	Alicante	Arr. Aug. 11	RION	Tyne	Batoum	P. Gibraltar, Aug. 11
FRANCE MARIE ..	New York ..	Stettin	P. Del. Break, Aug. 6	ROCK LIGHT	Rotterdam ..	Kustendje ..	P. Sagres, Aug. 8
GEESTEMUNDE ..	Philadelphia	Manchester	Arr. Aug. 7	ROSSIJA	Hamburg ..	Novorossisk	P. Malta, Aug. 10
GENESSE	—	—	—				
GEORGIAN	Philadelphia	Tyne	Arr. Aug. 7				
PRINCE	& La Pallice	—	—				
GOLDMOUTH	Cardiff	Singapore ..	Arr. Aug. 8				

Vessel.	From.	For.	Latest Date and Position.
ROTTERDAM (Now C. F. Tietgen)	New York ..	Copenhagen	L. Aug. 9
RUSSIAN PRINCE	New Orleans	Port Arthur (Texas)	Arr. July 31
SALAHADJI	—	—	Tr. Sts. Settlem'ts & Java Seas
SEMINOLE	Calcutta	San Francisco	L. July 5
SILVERLIP	Samboe	—	L. Aug. 4
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Antwerp	Newport	Arr. July 12
SOPHIE	Novorossisk	—	At Malta, Aug. 8
SPONDILUS	Samboe	—	L. July 16
STANDARD	New York ..	Swinemuude	P. Butt of Lewis, Aug. 15
STROMBUS	Cardiff	Singapore ..	At Cardiff, Aug. 13
SURAM	Batoum	—	P. Peniche, Aug. 14
SUWANEE	Barrow	Tyne	Arr. Aug 10
SVIET	Batoum	Odessa	L. June 1
TELENA	Hankow	—	L. Aug. 13
TEREK	Batoum	London	Arr. Consti'ple, Aug. 10
TIFLIS	Antwerp	Batoum	P. Constanti'ple, Aug. 5
TIOGA	Manchester	New Orleans	At Newport News, Aug. 9
TONAWANDA	San Francisco	Hong Kong	Arr. abt Aug. 15
TROCAS	Calcutta	Soesoe	Arr. Aug. 10
TURBO	Hamburg ..	Philadelphia	L. Aug. 13
TUSCARORA	San Francisco	Kurrachee & Bombay	L. July 4
TWINGONE	Rangoon....	Calcutta	L. Aug. 6
VEDRA	Tyne	Batoum	L. Aug. 15
VILLE DE DIEPPE	Dieppe	Havre	Arr. Apr. 26, in pt. Aug. 10
VILLE DE DOUAI	Hull	Ibrail	Arr. Aug. 10
VOLUTE	Sydney	Newcastle (N.S.W.)	Arr. Aug. 3
WEEHAWKEN	Tyne	Philadelphia	P. Dunnet Head, Aug. 4
WILLKOMMEN ..	Philadelphia	Stockholm ..	L. Aug. 14
WINNEBAGO (late Kinsman)	San Francisco	Shanghai ..	At Woosung, July 21

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

August 17th, 1906.

Present prices for refined petroleum are as follows:—
Russian and Roumanian, 5 $\frac{7}{8}$ d. to 6d.; American, 6 $\frac{3}{8}$ d. to 6 $\frac{1}{2}$ d.; and Water White, 7 $\frac{5}{8}$ d. to 7 $\frac{3}{4}$ d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £7 to £9 10s.

American dark cylinder, from £7 2s. 6d.

American filtered cylinder, from £11.

Shellene, £5.

No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine shews a slightly hardening tendency since our last report, sales having been effected for Spot 44s. 6d., September to December, 44s. 9d., and January to April 45s. 9d.

LIVERPOOL OIL MARKET.

August 16th.

Refined oils are quiet, and sellers now quote 5 $\frac{7}{8}$ d. for Russian, Galician or Roumanian; and 6 $\frac{3}{8}$ d. to 7 $\frac{7}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, August 16th.

Refined, in cases, is firm at 10.30; Standard White, 7.60; Credit balances, 1.58c.

PHILADELPHIA, August 16th.

Standard White is quoted at 7.55.

RUSSIA.

BAKU, August 13th.

The Baku oil market is very strong. The prices are: Light crude oil, spot, 31 to 31 $\frac{1}{2}$ copecs per pood; residuals in ships, spot, 33 copecs; kerosene 35 copecs per pood.

BELGIUM.

ANTWERP, August 8th.

The petroleum market is unchanged. Price of Standard White, spot, 19 $\frac{1}{2}$ francs per 100 kilos.; and and four last months of the year 20 francs.

FRANCE.

PARIS, August 13th.

Illuminating oil is quoted in bulk, in whole tank waggons, 20.25 francs per hectolitre; spirit, 25.25 francs per hectolitre. Special white oil, 28.25 francs per hectolitre.

GERMANY.

HAMBURG, August 13th.

The kerosene market is firm. The price of American Standard White is 7.10 marks per 50 kilos.

ROUMANIA.

August 2nd.

Crude oil from different fields, including	Franks.
pipe line charges, per 100 kgs.	3.70-3.80
Refined oil, exclusive of taxes	9.00- —
Motor benzine, including taxes	16.00-18.00
Benzine, doubly refined	24.00-25.00
Residuals in tank waggons, at refinery	3.00- —
Paraffin	120.00-125.00
Lubricating Oils—	
Agricultural...	30-32
Prime	35-37
Extra	40-42
Royal	45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilo.

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.00
Benzine, sp. gr. 0.710-0.715	11.00-12.00
„ sp. gr. 0.720-0.725	8.00- 9.00
„ sp. gr. 0.735-0.760	6.00- 7.00

INDIA.

BOMBAY, July 6th.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	Rs. 6 0 2
„ Chester, 125 deg.	4 8 0
„ Monkey Brand, 125 deg.	4 2 2
„ Bulk, 125 deg. (in local made tins)	3 10 0
„ „ 125 deg. (8 Imperial gallons)	3 0 0
„ "White Camelia" brand, 125 deg.	4 0 2

The Asiatic Petroleum Company, Limited.

Current rates are:—

Borneo oils, in tins, per pair	3 2 0
Sumatra "Rising Sun," bulk, per unit	3 0 0
„ „ tins, per pair	3 10 0
Silverlight cases, per case	4 8 2
Russian, "Anchor," cases	4 14 0

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Ram Brands, tin, Rs. 3-12-0 nett, per pair, ex-Bombay godowns.
Ram Brand, bulk, Rs. 3-2-0, per 8 Imperial gallons, ex-Bombay godowns.

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IMPORTS of PETROLEUM into UNITED KINGDOM

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FOR THE WEEK ENDED AUGUST 5TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
July	LONDON—			
31	L. and India Dock Com.	.. Lub.	2,670	Philadel.
Aug.				
1	Asiatic Petroleum Co.	Spirit	750,200	Pulo Samboe
	J. B. August Kessler			
1	H. P. Wheatley and Co.	Lamp	829,600	Batoum and Novorossisk
	(Cymbeline)			
2	G. W. Sheldon and Co.	.. M. Lub.	240	Antwerp
2	T. H. Lee .. ..	..	200	Hamburg
3	J. Barber and Co.	.. Lub. Gr.	1,500	"
3	Worthington and Boler	.. Lub.	4,600	Philadel.
3	G. and H. Green ..	..	3,330	New York
4	Scott's Wharf ..	..	4,000	"
4	Anglo-American Oil Co.	Lamp	563,130	Philadel.
	(Chesapeake)			
4	" ..	Gas	608,900	"
4	" ..	Lub.	226,080	"
	LIVERPOOL—			
1	Pickford's, Ltd.	..	1,430	Hamburg
2	Worthington and Boler	..	6,400	Philadel.
2	American Line ..	..	690	"
2	Geo. B. Taylor ..	.. Lub. Gr.	8,000	"
2	Meade-King, Robinson & Co.	Lub.	39,200	"
2	" ..	..	10,000	Hamburg
2	A. Hopps and Sons ..	..	2,390	"
2	Liverpool Storage Co.	..	2,120	Genoa
3	Crew, Levick and Co.	..	4,840	Philadel.
3	A. Hopps and Sons ..	.. M. Colza	10,720	"
3	Meade-King, Robinson & Co.	M. Lub.	2,400	"
	BRISTOL—			
2	Pickfords .. ..	.. L. Gr.	800	New York
July.	HULL—			
31	Wilsons and N.E. Railway Shipping Co.	Lub.	10,000	Hamburg
31	" ..	..	480	"
31	" ..	..	1,200	Antwerp
	MANCHESTER—			
31	J. T. Fletcher and Co.	..	4,160	"
Aug.				
2	D. Currie and Co.	..	900	Hamburg
2	Liverpool Storage Co.	..	870	New York
	MIDDLESBRO'			
3	S. J. Sutherland ..	..	2,120	Antwerp
	NEWCASTLE—			
2	Tyne-Tees S.S. Co.	..	120	Hamburg
	NEWPORT—			
1	Jones, Heard and Co.	.. Spirit	3,240	New York
2	Mordey, Jones and Co.	.. Lub. Gr.	470	Antwerp

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Aug.	GLASGOW—			
2	Anchor Line .. ..	.. Lub.	40,000	New York
2	J. D. Smellie .. ..	.. Spirit	32,600	Rotterdam
2	J. and A. Allan ..	.. Lub.	12,400	Philadel.
	GRANGEMOUTH—			
2	J. Currie and Co. ..	.. L. Paste	800	Hamburg
2	J. Rankin and Son ..	.. Lub.	310	Rotterdam
	LEITH—			
2	J. Currie and Co. ..	..	10,800	Hamburg
2	W. Graham Yool & Co.	.. Lamp	2,180	"
3	Geo. Gibson and Co.	.. Lub.	200	Antwerp
	BELFAST—			
2	G. Heyn and Sons ..	..	2,400	Riga
Total for the Week ..			3,208,690	

FOR THE WEEK ENDED AUGUST 13TH, 1906—

Aug.	LONDON—			
7	Anglo-American Oil Co.	Spirit	96,006	Rotterdam
	(Osceola)			
7	T. H. Lee .. ..	.. Lub.	1,980	Hamburg
7	London Oil Storage Co.	..	3,520	"
7	A. Brown and Co. ..	.. Lamp	4,000	Philadel.
7	G. W. Sheldon and Co.	.. L. Comp	2,400	New York
7	J. A. Paul and Co. ..	.. Petrol	100	Boulogne
7	" ..	..	150	"
8	" ..	.. M. Colza	130	"
8	Anglo-American Oil Co.	Lub.	42,760	New York
	(Minnehaha)			
9	Fielder, Hickman and Co. ..	..	12,000	"
7	Anglo-American Oil Co.	Gas	1,149,900	"
	(Col. E. L. Drake)			
9	" (S.O. Co. No. 95)	..	1,641,070	"
9	W. B. Dick and Co.	.. Lub.	4,880	Philadel.
9	London Oil Storage Co.	..	1,350	Hamburg
9	R. Park and Co. ..	..	970	Marseilles
9	G. W. Sheldon and Co.	..	290	Antwerp
10	E. J. Wilkinshaw ..	..	2,000	Philadel.
11	H. Funck and Co. (Erivan)	Gas	264,730	"
12	Ragosine and Co. ..	.. Lub.	48,00	"
12	Schliemars Oil Co.	..	2,400	"
12	A. Brown and Co. ..	..	6,800	"
12	H. Finkler and Co. ..	..	2,000	Fiume
12	J. Barber and Co. ..	.. L. Gr.	800	Hamburg
12	T. H. Lee .. ..	..	1,980	"
	LIVERPOOL—			
7	Penwarden and Jackson	.. Lub.	280	Antwerp
7	A. Hopps and Son ..	..	2,440	Baltimore
7	T. Meadows and Co.	..	240	New York
8	Liverpool Storage Co.	..	4,400	"
8	George B. Taylor	19,600	"
8	"	200	"
8	Cunard Steamship Co.	..	2,200	"

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DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.				
8	Valvoline Oil Co. ..	Lub.	14,150	"
8	Meade-King, Robinson & Co.	Spirit	40,470	Rotterdam
9	"	Lub.	8,000	Philadel.
9	Worthington and Boler	"	1,600	"
9	W. B. Dick and Co.	"	15,610	"
9	Crew, Levick and Co.	"	11,120	"
9	G. B. Taylor..	L.Gr.	3,000	"
9	E. H. Kellogg and Co.	Lub.	2,000	New York
13	Liverpool Storage Co.	"	1,200	"
BARROW—				
7	Anglo-American Oil Co. (Suwanee)	Lamp	592,500	Kustendje
7	"	Spirit	432,600	"
BRISTOL—				
7	H. R. James and Sons	Lamp	2,400	New York
7	"	Lub.	9,400	"
7	W. Smith and Co.	"	19,960	"
8	Pickfords	"	1,850	Hamburg
10	Anglo-Bosphorus Oil Co.	"	240	"
10	"	L.Gr.	2,240	"
10	W. Smith and Co.	Lub.	17,120	New York
11	H. R. James and Sons	"	7,880	"
11	"	M.Colza	2,200	"
GOOLE—				
7	Goole Steamship Co.	Lub.	600	Antwerp
HULL—				
7	Helmsing and Son	"	1,000	Riga
7	Thos. Wilson, Sons and Co.	"	4,200	New York
7	"	"	2,120	Fiume
7	W. Gilyott and Co...	"	4,000	Trieste
10	Hull & Netherlands S.S. Co.	Tar oil	3,840	Rotterdam
10	"	"	2,160	"

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.				
11	W. Gilyott and Co...	Lub.	2,400	New York
11	Anglo-American Oil Co.	"	43,260	"
11	T. Wilson, Sons and Co.	"	5,400	"
MANCHESTER—				
7	Meade-King, Robinson & Co. (Batoum)	"	1,330,000	Philadel.
NEWCASTLE—				
8	Tyne-Tees S.S. Co...	"	440	Hamburg
8	"	"	1,040	Antwerp
9	Furness, Withey and Co.	"	10,480	New York
10	C. Hassell and Son	"	54,280	"
13	Tyne-Tees S.S. Co...	"	340	Hamburg
GLASGOW—				
7	Donaldson Bros.	"	240	Baltimore
9	Anchor Line	"	1,220	New York
13	J. and A. Allan	"	800	Boston
GRANGEMOUTH—				
7	Rankin and Son	"	960	Rotterdam
9	J. Currie and Co.	"	440	Hamburg
9	"	"	2,000	"
LEITH—				
7	J. Currie and Co.	"	1,040	"
7	W. G. Yool and Co.	Lamp	2,180	"
11	"	"	2,180	"
11	J. Currie and Co.	Lub.	1,200	"
13	"	"	1,160	"
13	G. Gibson and Sons	"	4,960	Antwerp
BELFAST—				
9	J. C. Pinkerton and Co.	"	150	Hamburg
Total for Week			5,946,000	
Total for the past Fortnight			9,154,690	

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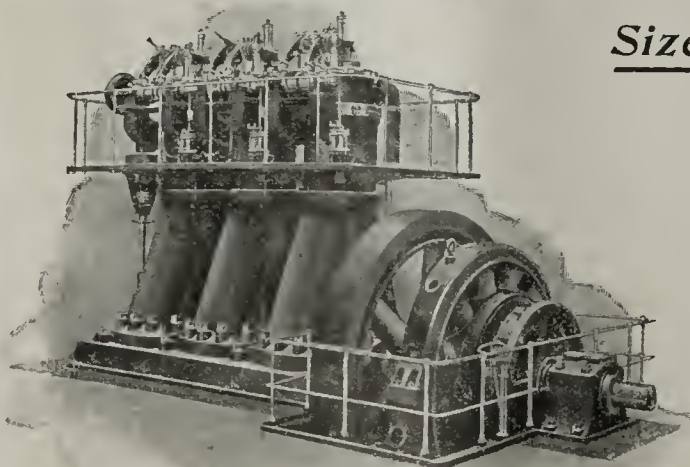
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The Petroleum Review.

By PAUL DVORKOVITZ.

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SEPTEMBER 1ST, 1906.

No. 380.

Editorial Notes.

The circular which has recently been issued to the shareholders of the *Burmah Oil Company* and its Agents. Oil Co. by the secretary is so explicit as to scarcely need comment at our hands. The arrangement which it is therein intended to lay down is the outcome of almost phenomenal prosperity, and briefly amounts to this. The original arrangement which the company made with its agents in India brought to them such a huge income that even they recognised the propriety of a revision—or a modification—of it. In the past, the Burmah Co.'s agents have been netting the nice little sum of an average of £33,000 per annum, and so it has been in order to devise a scheme which would aim at this sum being somewhat reduced, that the present articles of association have been altered. Under the contemplated new arrangement—which, it should be mentioned, is satisfactory to both sides—Messrs. Fleming's remuneration will be reduced to an extent which will save the company over one per cent. upon the ordinary capital. What is perhaps a very notable feature of the new arrangement is that the agent's commission is to be based upon profits, and not the gross value of the sales. Unfortunately, there are very few companies connected with the petroleum industry who are in the happy and enviable position of the Burmah Oil Co.

We publish upon another page of this issue the statistics shewing the production of crude oil at Baku in July, which did not exceed 21,600,000 poods. This is, of course, due to the strike among the workers. Messrs. Nobel and the English companies did not produce at all in July, while the Caspian and Black Sea Society produced only 600,000 poods. The firms least affected by the strike are the Caspian Society and Mantascheff. The tension prevailing at the Baku fields has naturally found expression in a rise in prices, and in the case of crude oil, spot has gone up to 34½ copecs; residuals, 35.36 copecs; and kerosene 40 copecs per pood. There are strong hopes, however, that the strike may soon come to an end, and thus a consequent increase in production of crude oil will be produced. In the meantime there are other items of information coming from Baku which are of an alarming nature. The total stocks of crude oil and residuals at Baku on the 1st Aug. (o.s.) did not exceed 25,600,000 poods, and of kerosene, 5,200,000 poods. Such smallness of the stocks during the busiest part of the navigation season will inevitably lead to a curtailment of the shipping programmes of the various firms. The consuming markets will therefore not receive all the oil they require, and there will be

room for further advances in prices in the interior. This seems to be the impression which the conditions at Baku have produced on the markets in the interior of Russia. At Astrakhan the prices of residuals have reached an unprecedented level; and at other centres prices have gone up in the same proportion. Sellers, fearing that shipments will be curtailed and they may be unable to fulfil their contracts, have stopped selling, and those consumers who have not assured themselves of their fuel supplies in advance are placed in a critical position. The same applies to the kerosene markets. The curtailment of oil shipments is affecting the shipping trade on the Volga to a considerable extent, and many steamers are lying idle for want of work.

During July a re-action apparently set in with regard to the petroleum exports from America, which were the smallest for some months past. There can be no doubt about it that the agitation against the Standard Oil Co., which has been pushed forward by the Government, has had a very depressing effect upon the American petroleum export trade, and this is sorely to be regretted since America was never in a better position for supplying the consuming markets of the world with the products of her numerous refineries. The total exports from America's eastern ports during the month amounted to a little over 87,000,000 gallons, and were valued at approximately \$6,000,000, which figures were a decline from those of June of 6,000,000 gallons in amount, and \$500,000 in value. Placed alongside the figures of a year ago, the statistics for July also shew a great decline, especially in the amount, which is 16,000,000 gallons less. There has been a falling off in the exports during the month of illuminating oils, crude, and residuum, but with regard to benzine and lubricating oils, these shew advances. The full details are to be found upon other columns.

The present troublous period through which the oil field regions of Grosny and Baku are passing promises now to be short lived. The fury of the strikers has spent its force, and though a little political feeling naturally lies beneath the surface, it is satisfactory to know that there has been a general calming down, and in many localities work has already recommenced. The workers at the Grosny oil fields, after two months' strike, returned to work a fortnight ago, and now operations at Grosny are said to be in full swing. Like many strikes in the Russian oil field regions, this was particularly of a senseless character, for though the men formulated demands, these were agreed to by the masters in their anxiety for a continuity of work within a few days after the men made them known. As to the strikes at Baku, the latest news from that place is also very re-assuring.

Hunger—that certain follower upon idleness—is causing many of the workers to adopt a more conciliatory attitude, and in some cases masters and men are now arriving at terms of settlement. This amicable spirit is especially prevalent throughout Messrs. Nobel's works, and the general belief is that the end of this unfortunate strike is fast approaching.

SAD MISFORTUNE TO AN OIL TANKER.

CAPTAIN AND THIRD OFFICER DROWNED.

A sad misfortune overtook the oil tanker, "Balakani" while in Mid-Atlantic last week, bound for London with a cargo of petroleum from Philadelphia. Heavy seas were running at the time, and as the captain and the third officer were assisting one of the sailors to make fast some ropes, a fierce wave struck the vessel, and washed both gentlemen overboard. Mr. Hewitt, the captain, was well known and highly respected, and has been in charge of the vessel since she was launched ten years ago.

Great sympathy will be extended to Messrs. Lane and Macandrew, who keenly feel the loss they have sustained, for Mr. Hewitt was recognised as one of the most experienced of oil tanker captains.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

SPIES PETROLEUM CO., LTD.—The output for the week ended 19th August was 132,225 poods, or 2,132 tons and for the week ended 26th August was 146,520 poods, or 2,360 tons.

The other English operating companies have had no production.

PETROLEUM IMPORTS INTO GERMANY.

JULY STATISTICS.

According to official statistics, the imports of petroleum products into Germany in July, compared to June, were as follows:—

		July. Tons.	June. Tons.
Illuminating Oil	.. ..	69,058	29,025
Lubricating Oil	.. ..	16,583	12,715
Crude Oil	.. ..	1,911	2,262
Crude Benzine	.. ..	8,695	8,564
Refined Benzine and Petroleum			
Ether	.. ..	1,474	1,055
Artificial Turpentine and other			
Mixtures	.. ..	107	91
Residuals	.. ..	42	29
Total	.. ..	97,870	53,741

The imports of petroleum products from the different producing countries in July, compared to June, were as follows:—

		July. Tons.	June. Tons.
U.S.A.	.. ..	66,711	29,410
Russia	.. ..	12,094	6,358
Dutch India	.. ..	6,793	6,981
Austria-Hungary	.. ..	6,668	3,165
Roumania	.. ..	2,688	3,123
Other Countries	.. ..	2,926	4,704
Total	.. ..	97,870	53,741

The quantities of various petroleum products exported from Germany during July were:—Illuminating oil, 37 tons; lubricating oils, 831 tons; residuals, 116 tons; benzine, 692 tons; total, 1,676 tons.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR JANUARY AND FEBRUARY AND MARCH, 1906 (In poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

	Submitted to Distillation.			Products Received.				
	Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.	Fuel used.
January	16,756,618	287,886	17,044,504	4,255,158	11,400,424	127,939	427,576	555,863
February	21,356,126	305,136	21,661,262	5,638,761	14,233,146	259,253	631,687	683,125
March	29,593,358	373,547	29,966,905	6,675,004	20,251,939	1,374,014	1,665,948	997,441
Three Months, 1906	67,706,102	966,569	68,672,671	16,568,923	45,885,509	3,493,028	2,725,211	2,236,429
" " 1905	101,178,070	915,887	102,193,957	28,087,348	67,094,887	3,727,779	3,183,907	3,781,954

Refining

	Submitted to Refining.			Refined Products Obtained.			Chemicals used.	
	Kerosene.	Other Distillates.	Total.	Kerosene.	Other Products.	Loss in Refining.	Acid.	Soda.
January	4,158,621	10,202	4,168,823	4,052,519	9,925	106,379	18,196	7,764
February	5,274,997	13,180	5,288,177	5,153,982	9,130	125,065	26,121	10,537
March	7,513,660	36,597	7,550,257	7,369,437	34,239	146,581	28,111	9,697
Three Months, 1906	16,947,278	59,979	17,007,257	16,575,938	53,294	378,025	72,428	27,998
" " 1905	26,596,146	134,879	26,731,025	25,834,119	116,312	782,494	147,968	54,791

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

	Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
January	640,713	56,610	36,762	647,106	682,191	354,034	109,730	58,924	382,965
February	1,166,313	47,736	45,949	1,076,465	838,986	558,922	48,880	477,864	716,829
March	1,335,530	149,374	75,823	981,166	716,690	680,129	33,011	523,114	656,681
Three Months, 1906	3,142,556	253,720	158,534	2,704,737	2,237,867	1,593,085	191,621	1,059,902	1,373,510
" " 1905	2,639,376	204,919	83,507	1,616,237	3,089,697	1,266,234	2,320	373,700	1,783,263

Refined Products Received.

	Spindle Oil.	Machine Oil.	Cylinder Oil.	Loss in Refining.	Chemicals used.	
					Acid.	Soda.
January	—	349,350	16,817	36,203	17,620	1,677
February	64,580	799,566	35,875	96,682	29,823	3,549
March	178,332	1,198,714	51,020	149,067	31,448	4,225
Three Months, 1906	242,912	2,347,630	103,712	281,952	78,891	9,451
" " 1905	129,978	1,921,283	44,769	236,704	90,697	11,789

The output of benzine distillates was: January, 56,243 poods; February, 78,241 poods; three months, 1906, 239,052 poods; three months, 1905, 269,553 poods. The output of refined benzine was: January, 31,499 poods; February, 35,585 poods; three months, 1906, 110,781 poods; three months 1905, 57,652 poods.

THE ROUMANIAN PETROLEUM INDUSTRY.

STATISTICS FOR THE FIRST HALF OF 1906.

We are indebted to the *Moniteur du Petrole Roumain* for the following particulars regarding operations in the Roumanian petroleum industry in the first half of 1906, based on official statistics.

The production of crude oil in Roumania month by month during the first six months of 1906, compared to the corresponding months of 1905, was as under :—

	1906. Tons.	1905. Tons.
January	58,219	42,066
February	55,650	44,079
March	67,464	45,234
April	75,235	46,615
May	76,061	46,865
June	71,729	47,308
Total	404,358	272,167

The increase in production in the first half of the current year against the corresponding half of 1905 amounted to 132,191 tons, or about 50 per cent., which should be considered quite satisfactory. Against the second half of 1905, the first half of 1906 shews an increase in production by 66,333 tons, or about 20 per cent.

The production of the various fields during the first half of 1906, against the first half of 1905, was as follows :—

	Six months, 1906.	Six months, 1905.	Increase or decrease in 1906.
PRAHOVA DISTRICT—			
Bustenari	238,898	187,512	+ 51,386
Campina-Poiana	52,252	46,670	+ 5,582
Moreni	62,726	10,442	+ 52,284
Baicoi	22,942	1,055	+ 21,887
Tinta	5,671	3,158	+ 2,513
Apostolache	1,064	59	+ 1,005
Recea	631	1,392	- 768
Other fields	1,810	1,078	+ 732
Total for Prahova	385,994	251,373	+ 134,621
DAMBOVITZA DISTRICT—			
Gura-Ocnitza	5,979	9,160	- 3,181
Colibasi	1,270	2,240	- 970
Glodeni-Badislavoi	859	1,051	- 192
Other Fields	79	80	- 1
Total for Dambovitza	8,187	12,531	- 4,344
BUZEU DISTRICT—			
Sarata	5,832	4,360	+ 1,472
Other Fields	110	293	- 183
Total for Buzeu	5,942	4,653	+ 1,289
BACAU DISTRICT—			
Various Fields	4,235	3,610	+ 625

It will be observed from the figures just given that the total increase in the production of the Roumanian oil helds during the six months has been most sub-

stantial, amounting in all to over 130,000 tons. As could only be expected, the important producing localities in the Prahova were alone responsible for the increase in the production, the great centres of interest in this connection being Bustenari, Moreni, and Baicoi. The growth of the production in the former case has been continuous and fairly steady, but in the districts of Moreni and Baicoi, the increase during the past year, for example, has been little less than remarkable as the figures shew. The other important field in the Prahova district that has been rapidly moving along in regard to development is Campina, where an increase of about 5,000 tons is recorded when the output for the

first half of this year is placed alongside that for the corresponding period last year.

With regard to the other producing fields of the country, the half-yearly figures shew nothing of any great importance, excepting it is that in the Dambovitza district, owing to the non-activity of the drill in Gura-Ocnitza consequent upon the policy of the International Co., a substantial decrease is recorded, this amounting to a drop of 33 per cent., as compared with the figures for the corresponding period of last year.

The production of the

leading firms during the period under review, as compared with the first six months of last year has been as under :

	Six Months, 1906.	Six Months, 1905.	Increase or decrease in 1906.
Steaua Romana	128,188	95,803	+ 32,385
Bustenari Co.	65,330	42,407	+ 22,923
Campina-Moreni Co.	41,623	11,780	+ 29,843
Telega Oil Co.	31,366	19,582	+ 11,784
International Co.	19,854	26,017	- 6,163
Romano-American Co.	17,344	1,545	+ 15,799
Moreni Co.	17,343	—	+ 17,343
Trajan Co.	11,947	13,871	- 1,924
Arnheemsche Pet. Co.	6,125	11,922	- 5,797
Aquila Franco-Romana	6,290	2,431	+ 3,859
Colombia Co.	5,629	1,839	+ 3,790
Grigorescu and Vladescu	5,419	6,279	- 860
Secoleanu Bros.	4,812	3,627	+ 1,185
Stanescu and Guiglescu	4,733	2,274	+ 2,459
Olandeza Romana	4,364	2,358	+ 2,006
Gallo-Romana Co.	2,959	—	+ 2,959
Van de Werk	2,078	2,885	- 807
Riske, Popescu and Ionescu	1,659	1,780	- 121
Grigorescu and Stroe	1,321	375	+ 946
Romano-Belgian Co.	1,317	—	+ 1,317
Louis Pasquier (Mercedes)	1,207	2,445	- 1,238
P. A. Manmescu	1,054	1,017	+ 37
J. Wagner	1,009	418	+ 591
Montana Co.	687	1,368	- 681
Apostolache Co.	1,064	59	+ 1,005
Ion Grigorescu	1,072	2,166	- 1,094



THE STEAUA ROMANA'S BUCHAREST REFINERY.

THE OUTPUT OF THE REFINERIES.

The output of various products by the refineries during the first half of 1906, against the corresponding half of 1905, was as follows:—

	Six Months, 1906.	Six Months, 1905.	Increase or decrease in 1906.
Benzine	53,499	38,411	+ 15,088
Illuminating Oils ..	109,606	68,369	+ 41,237
Lubricating Oils ..	21,900	9,117	+ 12,783
Residuals.. ..	167,282	107,864	+ 59,418
Total	352,287	223,761	+ 128,526
The quantity of Crude Oil treated at the refineries	364,662	235,050	+ 129,612
Production of Crude Oil	404,358	272,167	+ 132,191

The quantities of various products delivered by the refineries for home consumption during the half year were:—

	Six Months, 1906.	Six Months, 1905.	Increase or decrease in 1906.
Benzine	242	402	- 160
Illuminating Oil ..	12,919	11,324	+ 1,595
Lubricating Oil ..	2,998	2,516	+ 482
Residuals.. ..	100,715	69,870	+ 30,845
Total	116,874	84,112	+ 3,762

The quantities of petroleum products delivered by the refineries for export during the first half year were:—

	Six Months, 1906.	Six Months, 1905.	Increase or decrease in 1906.
Benzine	34,016	26,045	+ 7,971
Illuminating Oil ..	98,913	39,887	+ 59,026
Crude, Gas Oil and Distillate	18,387	19,904	- 1,617
Total	151,316	85,836	+ 65,480

The output of various products by the refineries and deliveries for home consumption month by month during the first half year was:—

	Output.	Deliveries for Home Consumption.
January	57,890	19,051
February	53,457	19,106
March	54,058	19,901
April	56,906	19,089
May	64,620	20,680
June	65,556	19,047
Total	352,287	116,874

The stocks of petroleum products left at the refineries on June 30th, 1906, were:—

	30th June, 1906.	30th June, 1905.
Benzine	13,795	17,230
Illuminating Oils ..	36,645	34,784
Lubricating Oils ..	18,627	8,108
Residuals	77,817	64,770
Total	146,884	124,892

The results of the treatment of the crude oil at the Roumanian refineries during the first half of 1906, in per cent., was as under:—

	Per cent.
Benzine	14.6
Illuminating oil ..	30.0
Lubricating oil ..	6.0
Residuals	46.0
	96.6
Loss on distilling and refining	3.4
	100.0

The Panolan Company.—The output of refined oil by the Panolan Co. in July amounted to 54,565 cases, making the total output for the first seven months of 1906 330,320 cases.

DUTY FREE PETROLEUM FOR CUBA.

Mr. Edwin V. Morgan, Minister to Cuba, under date of July 9, explains that in a former report on an increase in the duty on starch, it was stated that the enhanced charge was related to a project for placing crude petroleum, known under the name of fuel oil, on the free list. The Minister says:—

In the discussion of the bill it was alleged that cheap fuel oil was especially needed as a substitute for wood in order to prevent the further deforestation of the hills, which has already proceeded sufficiently far to threaten to affect the climate unfavourably and to injure the fertility of certain agricultural sections. Fuel oil, according to weight, costs less than wood, and is handled more easily and cheaply; it gives 25 per cent. more heat than hard coal, and four more times than wood and freight on, it is one-half less than on these two articles.

Petroleum at present is not imported as a manufacturing fuel, and the customs tariff does not take cognisance of it in that character. Crude oil derived from schists, including crude petroleum and axle grease for cars and carts, pays \$1.40 per 100 kilogrammes; and other mineral oils, rectified or refined, intended for illumination or lubrication, pay \$3.50 per 100 kilogrammes. Military order, No. 97, series of 1901, authorised a reduction of 50 per cent. on crude petroleum imported for the purpose of manufacturing gas, a reduction which is also enjoyed by cordage oil under section "a" of paragraph vii., "imported by and used exclusively for cordage works in their manufacture of rope and cordage, provided that the importation be made at the direct demand of the president of the cordage company, and that the latter submit their works at all times to the inspection of the customs authorities, and that the importer gives such bond as may be thought necessary by the acting collector."

Should crude petroleum for use as fuel in cane mills be granted, this reduction, the desired object, cannot be obtained, and for that reason it seems expedient to place it on the free list.

The following is the text of the bill which passed the House during the late session of Congress, and which is not unlikely to be approved by the Senate at the approaching session:—

Article 1. Crude petroleum, called in English "fuel oil," is hereby declared free of customs duties upon importation, provided that it be introduced as a combustible for the manufacture of sugar, or for use as an insecticide or germicide, and for the destruction of harmful plants, and is imported by agriculturists or sugar planters.

Article 2. Said fuel oil shall be imported in sailing vessels or in tank steamers, and its density shall not exceed 25° B. (9.045 specific gravity).

Article 3. Shippers under authorisation of the executive, and who fulfil the requisites called for in such authorisation, are exempt from the provisions prescribed in the foregoing article, provided that the petroleum imported does not exceed 100 gallons in any one receptacle.

THE PRODUCTION OF ASPHALT IN 1905.

The Department of the Interior of the United States has recently issued a brochure by Mr. Edmund Otis Hovey, which forms another chapter from the publication of the mineral resources of the United States. The present document deals with the production of asphaltum and bituminous rock in 1905. During last year the production in the States reached the record figure of 115,267 short tons, or about 7,000 short tons in advance of the production for the year 1904. The value, however, was not so great as in the previous year, while it was 250,000 dollars less than the value for the product received during 1903.

The production of oil asphaltum, the author points out, is an industry peculiar to California, and most of the material is made as a by-product in the distilling of lubricating and illuminating oils, and lighter products from crude petroleum of asphaltic base. Such oil asphaltum, it is stated, could be manufactured in California in quantities far greater than are required to fill the needs of the whole United States, and the industry is now suffering from over-production. The price of crude oil acceptable to the refiner of asphaltum has, generally speaking, been about 33 per cent. less than it was in 1904, but even with this advantage, the oil asphaltum producer has not been able or only barely so to meet the expenses, for in many cases the asphaltum has been sold for less than the actual cost of manufacture.

It appears from the evidence of chemists, that the refiners are handicapped by the absence of a process of manufacture, which will economically produce an asphaltum free from deleterious products of the cracking process which goes on in the stills during the distillation of the heavier oils, with a uniform and suitable penetration and possessing stability on heating. Another obstacle to the trade is the high price of containing packages. No cheap and satisfactory substitute for the wooden stave barrel has yet been found for asphalt. Barrels of about 480 lbs. capacity cost 63 cents or more each at the refineries, and are, therefore, an expensive container for a comparatively low priced material.

Mr. Hovey proceeds to state that the California refineries have begun the manufacture on a large scale of a liquid asphaltum from certain oils of asphaltic base. This is known to the trade as the "L" grade asphalt, and is about the consistency of thin molassas at ordinary temperatures. It is used, to some extent, as a solvent for the hard asphalts, but more particularly, and on a larger scale, for direct application to roads at a temperature of about 100 degrees F. This material brings a much lower price per ton than the hard grades of oil asphaltum, but there is a great saving in the item of cooperage since the "L" grade (also known as road oil) is delivered by the refineries into tank cars, and is pumped from the tank cars into tank waggons for spreading over the roads.

The author then proceeds to touch upon the countries other than America which are developing the asphalt

industry, and, in the first place, mentions Trinidad, in which country, he adds, the enormous deposits of asphaltum have been known for about a century.

The asphalt of Trinidad is described as occurring in two forms - land pitch and lake pitch—although there seems to be no fundamental difference between the two varieties. The pitch lake is the original source of all the asphaltum which is exploited in the vicinity of the village La Brea, and between the village and the lake, the land pitch being material which has overflowed from the pitch lake through a crevice in its side, and has descended the slopes to the sea. The surface of the lake is 138 feet above the sea, its area is about 100 acres, and it is nearly circular in outline. The bed of asphalt forming the lake is from 18 to 78 feet in thickness. The early reports described the material near the middle of the lakes as being warm and soft, but now the asphalt is firm enough to support teams at any point for a long enough time to permit of loading. Much water is present in crevices in the asphalt. The lake is thought to occupy the crater of an old mud volcano, and a constant supply of asphaltum is coming into the lake from subterranean sources. Excavations in the pitch lake, and also in the land pitch, fill up again with asphaltum in a short time.

The author points out that the exports of asphaltum from the island of Trinidad decreased enormously during last year, and were the lowest in grand total for any year since 1898. According to the report of the New Trinidad Lake Asphalt Co., Ltd., the total quantity of asphaltum exported from Trinidad during 1905 was 128,685 short tons, as compared with 151,122 tons for the preceding year. The diminished exports to the United States account for the decline. Since records have been kept, more than 2,533,440 short tons of asphaltum have been removed from the pitch lake of Trinidad, and exported to foreign countries.

Manjak is the local name applied to the asphaltic occurrence which occurs so far as is known upon the Island of Barbados alone. The material is reported as occurring in veins which vary in width from one-fourth of an inch to 30 feet. The veins have a general north-north-east strike and varying dip. The country rock is an argillite or shale, which, in places, is so saturated with bituminous matter that petroleum has been produced by destructive distillation at the rate of 37 gallons per ton of shale. The annual production of manjak in Barbados for the past five years has been as follows:—1901—1,168 short tons; 1902—1,033 short tons; 1903—728 short tons; 1904—707 short tons; and 1905—725 short tons. The average figure for manjak is said to be \$42 per ton.

The production of asphaltum from Bermudaz Lake, in Venezuela, which fell off considerably during 1902, and the following year on account of the litigation between the two American companies claiming the right to work the deposits, attained unusual proportions recently, and the production for the past year is placed at 33,461 tons, and valued at \$149,573.

THE BURMAH OIL COMPANY.

CIRCULAR TO THE SHAREHOLDERS.

The following circular has been issued to the shareholders of the Burmah Oil Co., Ltd., by the company's secretary during the past few days:—

With reference to the accompanying notice convening extraordinary general meetings of the Burmah Oil Co., Ltd., to be held on 6th and 21st September, I am instructed to say that early last year the Board thought it proper, in view of the great expansion of the volume of the sales of the company's products, that the managing agents' remuneration—which, since the incorporation of the original company in 1886, had been a commission on the gross value of the sales of the company's products—should be arranged on a different basis. As the chairman was to visit Burmah later in the year, it was decided that he should confer with his co-partners in Rangoon on the subject. On the chairman's return to this country he informed his co-directors that Messrs. Finlay Fleming and Co. recognised the propriety, under the altered circumstances, of a re-arrangement, and were willing that it should take effect as from 1st January, 1906. Negotiations as to the details of the proposed new arrangement were thereupon entered into, but it was thought advisable that the adjustment of the new terms should not be completed until the proposed additional directors had been elected. The enlarged board have now given the subject their careful consideration, and the result of the negotiations between the board and Messrs. Finlay Fleming and Co. is set forth in the resolution to be submitted to the meetings.

In this connection it may be explained that Mr. Francis B. Palmer, barrister, London, the specialist in company law by whom the terms of the present company's articles of association were settled, advised that under them the terms of the managing agents' appointment and remuneration could not be altered as proposed, except by a special resolution of the shareholders in general meeting, that the managing agents could only be removed from office for incompetency or wilful default, and that a resolution of the company in general meeting would be required to effect the removal. The managing agents, however, at once stated that they would agree, not only to the basis of their remuneration being altered as proposed, but also, subject to a reasonable period being secured to them while they were not guilty of incompetency or wilful default, to hold office on the footing of their being removable by ordinary resolution of the company in general meeting, without any restriction as to the power of removal being only available in the event of incompetency or wilful default. These concessions are embodied in the proposed new article, which provides that the appointment shall be for five years from 1st January, 1906, and thereafter from year to year till removed from office, and that, in place of a commission of 5 per cent. on the gross value of the sales made by themselves directly and of $2\frac{1}{2}$ per cent. on the gross value of the sales made by or through sub-

agents, the managing agents shall be paid a fixed annual salary of £15,000 and a commission of $2\frac{1}{2}$ per cent. on the profits of the company as defined in the resolution.

The managing agents' net remuneration from all sources during the four years since the reconstruction of the company has been in round figures as follows:— For the year 1902, £21,000; for the year 1903, £30,000; for the year 1904, £41,000; for the year 1905, £41,000. On the basis of 1905 the proposed new arrangement will shew a saving to the company of about £16,000 per annum, and, as the commission part of the remuneration is now proposed to be on profits in place of on gross value of sales, the more the volume of the company's business increases, the greater will be the saving.

The board are unanimously of opinion that the arrangement proposed is a fair and reasonable one, that the managing agents have met the board generously, and that the proposed new article will put the managing agents' tenure of office in a satisfactory and equitable position. You will observe that, under the proposed new article, Messrs. Finlay Fleming and Co. are to be in name, as they have been in fact, not merely the company's agents and superintendents in India, but the company's managing agent outwith the United Kingdom. The company's sub-agencies and affairs throughout Asia and in Australasia, Africa, and elsewhere outwith the United Kingdom are directed and controlled from Rangoon by Messrs. Finlay Fleming and Co. For the information of the general body of the shareholders, many of whom will have no knowledge of the position, I am instructed to state that the chairman and Mr. Adamson, who have devoted practically their whole time and attention to the business of the company, are the only directors who in any way participate in the managing agents' remuneration, they being partners of the firm of Finlay Fleming and Co., and that otherwise neither they nor any of their co-partners hold salaried positions under the company. The firm of Milne and Co., who, since the incorporation of the old company, acted as secretaries of that company and of the present company, resigned office in April last, and agreed to forgo their remuneration as such since 31st December, 1905. In conclusion, the board confidently ask the shareholders to confirm the arrangement embodied in the article proposed to be substituted for article 121 of the present company's articles of association.

SAN FRANCISCO TO LARGELY USE LIQUID FUEL.

The new San Francisco will go in very largely for the use of liquid fuel. After the recent disaster, it was found that many of the storage installations throughout the city were intact, and in no single case had the fuel assisted in any way to feed the flames which swept certain parts of the city. In the midst of that terrible misfortune, the use of oil as a safe fuel was clearly proved, and so it is that in the new city, at least 90 per cent. of the fuel installations will be for the burning of petroleum. Hotels, office buildings, factories, and in fact every establishment where fuel is required, oil will be the popular commodity, not only on account of its safety and convenience, but also on account of its cheapness. The various operating companies, whose offices were burned down, have now established themselves in new quarters, and to-day the State's oil industry is being conducted from headquarters erected in other parts of San Francisco.

OIL FUEL FOR AMERICAN LOCOMOTIVES.

Perhaps no interests have been more benefited in the United States by the abundance of fuel oil than those of the railroad companies especially in the West and South-west, writes Mr. Allen Willey in the *Scientific American*. The substitution of liquid fuel for coal and wood on the Pacific coast is so extensive that nearly all the freight and passenger locomotives of the principal systems, such as the Santa Fe and the Southern Pacific, burn petroleum exclusively. While many of the standard coal-burning engines have been equipped with oil-burning apparatus, and the space devoted to coal utilised for oil tanks, a large number of locomotives has been designed and built exclusively for the use of liquid fuel. The comparative tests that have been made of the best steam coal and of ordinary petroleum such as is produced from the California and Texas regions prove beyond question that the latter is more economical. Its use has passed well beyond the experimental stage.

One of the great advantages of petroleum is that fueling stations along the various systems can be supplied with little inconvenience, the oil being stored in reservoirs which are filled from trains of tank cars. The storage reservoirs are usually located adjacent to the water tanks, and the conduits serving the locomotives may be placed next to the water pipes, so that fuel and water tanks of an engine can be filled at the same time. In fueling a locomotive, a pipe similar to the ordinary pipe used for filling the water tank is employed, the upper end swinging on a flexible joint at right angles to the vertical pipe, which is connected to the supply reservoir either by an elevated or surface conduit. The connection is such that upon the opening of a valve the oil will flow into the engine tank by gravity.

The cost of equipping a passenger or freight locomotive with oil burning apparatus ranges between \$100 and \$150 to each engine, some of the systems being more expensive on account of the patents. The experience of the engineers with the liquid fuel is that they can make steam in about one-half the time required to get a coal burning engine ready for service. By means of the ordinary burner the supply of oil can be regulated to a nicety, the flame being washed through a peep-hole in the furnace door. By noticing the hue of the flame, the fireman can tell at a glance whether the spray in which the fuel is forced into the fire-box contains too much or too little petroleum, and the proportion can be increased or diminished by merely turning a regulating valve. If the flame is white, the combustion is practically complete. Engineers who have been utilising petroleum claim that it becomes a smokeless fuel if the firing is properly done. This alone gives it a great advantage over coal, to say nothing of the reduced labour of the fireman.

The main difficulty experienced in the burning of liquid fuel is the formation of a deposit in the bottom of the firebox when the combustion is not perfect. This forms a mass so hard that it is necessary to break it up with an iron bar in order to remove it. When a layer

of carbon has formed it decreases the draught and makes it difficult to keep up the requisite steam pressure. Another difficulty which has been encountered is the tendency of the oil to clog the spraying conduits. Being secured from a wide area of territory, the oil is not of uniform consistency, some kinds having higher specific gravity than others. If too much of the heavy oil is forced through the spraying apparatus, it may choke the feeding conduits, so that the feed ceases and the steam cannot be generated. A few instances have occurred on the south-western lines where engines have been disabled from this cause, but they are only occasional.

The use of petroleum fuel is of especial value in south-eastern California and in Arizona, where the distance from the nearest coal deposits is so great that the expense of transporting coal to the several supply stations is a very important item. As three barrels of oil equal a ton of ordinary steam coal, a train of tank cars will carry a much larger supply of fuel than a coal train of the same tonnage. Going from station to station, enough cars are switched off at each to fill the reservoirs. The operation is usually performed by an ordinary steam pump, as the reservoir is placed on an elevated base so it can be emptied by gravity.

A NEW STANDARD PHOTOMETRIC OIL LAMP.

Dr. A. H. Elliott, after about a year's experience, has developed a simple standard photometric oil lamp which has valuable features, particularly for use in measuring the intensity of gas flames, says *Progressive Age*. He adopted a flat wick, one and one-half inches wide, held in an ordinary burner, and supplied with kerosene oil by the well-known student lamp-feed system. He has found that, for practical purposes, this lamp has many advantages. It is constant over a considerable period of time; it is easily arranged and adjusted; several persons can obtain the same results without difficulty, and the standard is not difficult to reproduce. The intensity of the flame is little affected by the character of the wick and by slight variations in the quality of the oil. In use, the wick is trimmed when dry so as to be one inch wide at the top, the corners being cut off diagonally at an angle of about sixty degrees. A flame screen is placed between the flame and the photometer, which has an opening one and one-half inches wide and seven-eighths of an inch high. The flame is adjusted until this screen just cuts off the top and side edges and a part of the blue zone shews through the opening. It is best, in preparing the standard, to select a wick which has been found to give good results, and then to buy a gross of them at a time, as in this way a uniform quality will be attained. The chimney employed is Macbeth's No. 40 pearl glass. The wick may be used for about a week by brushing off carefully the charred top, but it is best not to use them too long, as the capillarity decreases with use. Some tests are given to shew the reliability of this secondary standard. When used on different days, by different observers, the candle-power does not vary more than a few per cent., and averages a little over ten candles. A number of lamps constructed in this way, when compared, gave concordant results. It is important, in using the lamp, to trim the wick carefully.

THE STRIKE AT THE GROSNY OIL FIELDS.

END OF THE CONFLICT.

The *Trade and Industry Gazette*, in a recent issue, publishes some details regarding the great labour strike at the Grosny oil fields.

At the beginning of June, the men employed by the contractors, those in the workshops, refineries, and flour mills, came out on strike. On the 11th of the same month, they were satisfied by the granting of a nine-hours' day and payment of part of the wages for the strike period; nevertheless, all the men did not go back to work. The petroleum producers, on the other hand, came together upon the occasion of the strike at the refinery of the Akhverdoff Co., and of their own free will decided to introduce at the oil fields a nine-hours' day for labourers and artisans, but retain the eight-hours' day for the baling men, pump men, and stokers who work in three shifts of continuous work, and for the drillers they left a 12-hours' day and two shifts, with an increase of 10 per cent. in wages. For three days work went on under these new conditions, but there were plenty of indications that a fresh outbreak was coming. On the 15th of June a strike began on the Spies Petroleum Co.'s property, and spread to all the other properties. Only the clerks, managers, and watchmen remained. The electric light service continued for two days, and was then shut down by the strikers. A strike committee was elected of 40 men. The committee admitted that the best conditions of labour prevailed on the properties of the Kasbeck Syndicate and taking them as a basis they elaborated a series of demands regarding the hours of labour, pay, etc. These demands were communicated to the President of the Grosny Petroleum Association, who called a meeting of the producers to consider the same. Negotiations commenced, but were broken off before a discussion of details could be entered upon.

On June 18th, the employers recommenced negotiations with the workmen's delegates. A meeting took place, but no arrangement was arrived at, and the employers announced that the men were to be paid off. None of the men presented themselves to get their money, but the announcement led to a restriction of the supply of food on credit by the co-operative store.

On the 23rd of June the Governor-General came down to the oil fields together with the cashiers of the various firms to pay the men off, but the latter, with few exceptions still, declined to be paid, and at the same time declared that they would not go back to work unless their demands were granted.

This waiting attitude continued up to the 4th of July (o.s.). Some of the workmen returned to their homes in other parts of the country. On June 26th the district of well No. 11 on the property of the North Caucasian Co. was destroyed by fire. Throughout the strike period great fears were entertained for the safety of the spouters of the Akhverdoff Co. On July 4th the employers again began to confer among themselves regarding the demands of the men, but without the participation of the provincial authorities or the work-

men's representatives. By the 8th of July they worked out their reply to the men's demands, which, however, failed to satisfy the latter. The workmen demanded to be paid three months' wages from the date of the beginning of the strike, when they offered to leave the oil fields. The men became particularly bitter against the managers and office staffs of the firms, from whom under threats they demanded half of the pay they have been receiving during the strike period.

At a conference held from 10th to 17th July, the employers conceded almost every point in the demands of the men which were not too onerous. They also bound themselves not to adopt any repressive measures. Any resumption of work on individual properties without a general agreement was thus rendered impossible. The attempts made by the workmen of the Kasbeck Syndicate to restart work for their firm stopped under protests and threats.

The producers again conferred with the Governor-General and the Chief Mining Engineer. New regulations for work at the oil fields were elaborated, in accordance with this new conditions, and the newly-adopted arrangement of eight-hours' shifts was confirmed by the Chief Mining Engineer.

The workmen took no notice of the new regulations, and left work at the times prescribed by the old regulations, and therefore on July 30th the producers decided to discontinue branches of work thus affected. In the western section of the fields the same step was taken on the 3rd of August. The day labourers found no support among the men employed on monthly wages.

On the 4th of August the strike came to an end. An undertaking to submit to the new regulations was signed by each workman on the conditions that all were taken back to work, four days' wages to be deducted, and no further advances made. In the western fields, the last-mentioned conditions were applied only in solitary cases, as there work stopped only for one day, whilst the Kasbeck Syndicate and the Tcheleken-Daghestan did not stop at all.

GALICIAN PETROLEUM PRODUCTION IN THE FIRST HALF OF 1906.

The production of crude oil in Galicia month by month during the first six months of 1906 was as follows:—

			Boryslaw-Tustanowice Field. Tons.		Total for the Whole of Galicia. Tons.
January	..	..	41,586	....	60,130
February	..	..	37,559	....	55,292
March	..	..	46,042	....	64,742
April	..	..	50,718	....	67,470
May	..	..	45,360	....	63,280
June	..	..	46,100	....	62,639
Total	..	..	267,365	....	373,553

The production of the various fields during the first half-year was as under:—

					Tons.
West Galicia—					
Potok	..	..	..	..	8,707
Rogi..	..	..	..	..	8,910
Rowne	..	..	..	..	755
Tarnawa-Wielopole-Zagorz	..	..	..	..	12,010
Krosno	..	..	..	..	19,204
Other West Galician Fields	..	..	..	..	16,918
East Galicia—					
Boryslaw-Tustanowice	..	..	..	..	267,365
Schodnica	..	..	..	..	25,241
Urycz	..	..	..	..	7,623
Mrzdnica	..	..	..	..	780
Other East Galician Fields	..	..	..	..	6,040
Total	..	..	..	..	373,553

DELIVERIES OF PETROLEUM PRODUCTS FROM BAKU.

STATISTICS FOR THE FIRST HALF OF 1906.

The quantities of petroleum products forwarded from Baku in various directions during the first half of 1906, compared to the corresponding period of 1905, were as follows:—

	Six Months, 1906. Poods.	Six Months, 1905. Poods.
I.—ILLUMINATING OILS.		
By Transcaucasian Railway—		
To Batoum	9,055,087	18,530,227
,, Other Stations	868,187	801,828
,, Baku-Petrovsk Branch Line.	402,338	857,488
,, Caspian Sea—		
To Astrakhan	21,200,941	23,523,429
,, Petrovsk	815,167	4,989,600
,, Transcaspian Province..	649,100	622,727
,, Other Caspian Ports ..	3,444	5,492
,, Persia	452,636	768,727
,, Road	399,927	403,138
Total	33,846,797	50,502,616
II.—LUBRICATING OILS.		
By Transcaucasian Railway—		
To Batoum	4,546,653	4,140,507
,, Other Stations	88,807	40,712
,, Baku-Petrovsk Branch Line.	97,152	75,503
,, Caspian Sea—		
To Astrakhan	2,408,775	1,953,809
,, Petrovsk	500,759	185,715
,, Transcaspian Province..	36,564	34,797
,, Other Caspian Ports ..	8,104	6,261
,, Persia	149	—
By Road	94,829	100,746
Total	7,781,792	6,538,050
III.—RESIDUALS.		
By Transcaucasian Railway—		
To Batoum	752,462	481,932
,, Other Stations	2,993,616	6,148,509
,, Baku-Petrovsk Branch Line	309,254	334,686
,, Caspian Sea—		
To Astrakhan	101,283,820	134,986,570
,, Petrovsk	170,994	2,782,375
,, Transcaspian Province..	2,813,168	6,230,206
,, Other Caspian Ports ..	1,463,653	1,925,092
,, Persia	65,981	101,823
,, Road	586,933	785,159
Total	110,439,881	153,776,352
IV.—CRUDE OIL,		
By Transcaucasian Railway—		
To Batoum	2,193	6,769
,, Other Stations	4,406,844	923,318
,, Baku-Petrovsk Branch Line	5,696	11,980
,, Caspian Sea—		
To Astrakhan	12,921,299	12,206,142
,, Transcaspian Province..	325,150	38,808
,, Other Caspian Ports ..	118,103	7,368
,, Persia	23,146	32,446
,, Road	12,612	6,237
Total	17,794,235	13,233,668
V.—OTHER PRODUCTS.		
By Transcaucasian Railway—		
To Batoum	1,560	3,321
,, Other Stations	30,437	40,871
,, Baku-Petrovsk Branch Line	120,852	112,586
,, Caspian Sea—		
To Astrakhan	835,554	472,551
,, Petrovsk	—	1,772
,, Transcaspian Province..	1,500	14
,, Other Caspian Ports ..	33	—
,, Persia	1,124	—
,, Road	36,224	112,228
Total	1,027,284	743,343

The total deliveries from Baku of all products during the first half-year were as under:—

	Six Months, 1906. Poods.	Six Months, 1905. Poods.
By Transcaucasian Railway—		
To Batoum	14,357,955	23,162,756
To Other Stations	9,387,891	7,955,868
,, Baku-Petrovsk Branch Line ..	935,292	1,392,243
,, Caspian Sea—		
To Astrakhan	138,650,389	173,142,501
,, Petrovsk	1,486,920	7,959,462
,, Transcaspian Province ..	3,804,674	6,926,552
,, Other Caspian Ports ..	1,593,307	1,944,173
,, Persia	543,036	902,896
,, Road	1,130,525	1,407,508
Total	170,889,989	224,794,029

The total deliveries, in all directions, of various products from Baku during the first half-year were:—

	Six Months, 1906. Poods.	Six Months, 1905. Poods.
Illuminating Oils	33,846,797	50,502,616
Lubricating Oils	7,781,792	6,538,050
Residuals	110,439,881	153,776,352
Crude Oil	17,794,235	13,233,668
Other Products	1,027,284	743,343
Total	170,889,989	224,794,029

BATOUM PETROLEUM EXPORT TRADE.

DETAILS FOR THE FIRST HALF OF 1906.

The deliveries of petroleum products from Baku to Batoum during the first half of 1906, compared to the corresponding period of 1905, were as under (in poods):—

	Six Months, 1906. Poods.	Six Months, 1905. Poods.
Illuminating Oils—		
Light Kerosene	10,607,431	16,719,115
Light Solar Oil	695,244	1,343,208
Lubricating Oils—		
Machine Oil	2,982,969	3,336,146
Machine Oil Distillate	88,103	279,888
Spindle Oil	424,550	—
Cylinder Oil	66,988	313,958
Heavy Solar Oil	—	46,154
Residuals	839,457	562,569
Crude Oil	66,013	34,176
Total	15,770,755	22,635,304

The shipments of petroleum products from Batoum to foreign markets during the first half of 1906, compared to the first half of 1905, were as follows (in poods):—

	Six Months, 1906. Poods.	Six Months, 1905. Poods.
Illuminating Oils—		
Light Kerosene	8,814,887	15,730,405
Kerosene Distillate	—	1,013,790
Light Solar Oil	857,800	1,064,062
Lubricating Oils—		
Machine Oil	2,732,554	3,754,228
Machine Oil Distillate	189,142	
Spindle Oil	421,079	
Cylinder Oil	54,777	
Heavy Solar Oil	625	
Sabonaphtha, Vaseline, etc. ..	20,161	112,000
Residuals	622,054	
Crude Oil	31,280	
Total	13,743,945	21,674,485

The shipments of various oils from Batoum to Russian ports for the half year were:—

	Six Months, 1906. Poods.	Six Months, 1905. Poods.
Illuminating Oils—		
Light Kerosene	1,442,122	1,893,509
Light Solar Oil	13,449	
Pyronaphtha, Astraline, etc. ..	3,903	
Lubricating Oils—		
Machine Oil	135,681	95,189
Machine Oil Distillate	93,672	
Spindle Oil	11,300	
Cylinder Oil	12,277	
Heavy Solar Oil	12,563	
Sabonaphtha, Vaseline, etc. ..	869	3,620
Residuals	621	
Crude Oil	31,280	
Goudron, etc.	647	—
Total	1,596,423	1,992,318

DEATH OF MR. A. A. BULGAKOFF OF BAKU.

With great regret we have to record the sad news of the death of Mr. A. A. Bulgakoff, one of the pioneers of the boring industry at Baku.

At the beginning of Mr. Bulgakoff's career, the number of technical men engaged in the petroleum industry was very small, the majority of the pupils of universities and high technical colleges who became interested in the industry in the early seventies and eighties came straight from the schools to the works which they had to guide and manage, with very few practical men to direct them to solve the numberless and serious questions which surround every industry, and particularly such a complicated industry as that of petroleum.

At the time of which we speak, the few technical men connected with the industry had to be their own geologists, boring engineers, chemical engineers, chemists, cooperage manufacturers, and all round business men. Naturally, such combination was a very difficult one to obtain in one man, but that difficulty was overcome by forming what we might call a family tie between all technical men engaged at Baku, and in any difficulty or problem which had to be solved in the daily work, the assistance of all colleagues was secured. Almost every day all the professional men at Baku engaged by the different firms met together, and thus every one had the opportunity of the advice of his colleagues, which was always freely given, and this mutual good feeling has been the principle of the formation of the Imperial Technical Society of Baku.

The deceased gentleman was one of the most enlightened engineers and best informed specialists of the mining industry, possessing at the same time a varied scientific knowledge. Narrow specialism being foreign to his mind, he devoted much of his time to public and educational matters, which was duly appreciated by the local technical men who elected him vice-president of the Baku Technical Society and made him editor of the bulletins of the Society.

During the time of his activity at Baku, Mr. Bulgakoff constantly put forward the view that science must not shut itself in within the narrow limits of specialism, but must become public property, and this view was expressed in his numerous lectures on geology.

In 1894, having left Baku, Mr. Bulgakoff entered upon a new stage of technical activity in the capacity of pioneer in the developement of new petroleum enterprises. In that year he read papers before the Technical Society dealing exhaustively with several new petroleum localities, and he wrote an exhaustive report on the Grosny fields. In the same year he commenced boring operations in Daghestan, on the property of Count Vorontzoff Dashkoff, while in 1896 Mr. Bulgakoff transferred his activities to Grosny, where he was invited to take up the management of the properties of the Moscow Co., and subsequently in 1901 he took over the management of the properties of Mr. Kholodowsky. With the formation of the Council of the Grosny Petroleum Association, Mr. Bulgakoff was elected,

first as member, and subsequently twice as chairman, of the Council. In this sphere of activity he shewed the full breadth of his views. He did a great deal for the proper organisation of the Grosny oil fields and for the enlightenment of the oil field population by the establishment of oil field schools and popular lectures. Mr. Bulgakoff invariably gave his whole-hearted support to every enterprise in the direction of the enlightenment and uplifting of the people. With the establishment of the library in Grosny, he became member of the management committee, and devoted to this matter much labour and energy.

Mr. Bulgakoff wrote many works on technical subjects relating to petroleum and general mining industries. To his labour we are indebted for the translation and publication in Russian of Fauck's well-known handbook on "Well Drilling."

Heavy and exhaustive labour had undermined the delicate health of Mr. Bulgakoff. Last year he passed through a severe attack of heart disease; this summer his illness became complicated by a chill and pneumonia, and he passed away on the 30th July (o.s.), leaving in the petroleum industry a void which it will, indeed, be difficult to fill.

THE USE OF CRUDE OIL IN GAS ENGINES.

Our bright contemporary, the *Commercial America*, records the fact that a device whereby crude oil is enabled to furnish the source of power for gas engines has been perfected. The mechanism and principle involves a horizontal rotating drum with interior spiral ribs, enclosed in an outer casing. The crude oil enters the drum at one end, and by rotation and the spiral ribs, is carried slowly and uniformly through it. While the oil is passing through the drum it is exposed to sufficient heat to generate gas, which is drawn off and utilised by the engine in proportion to the amount generated, and the residue is discharged. The heat is supplied by the exhaust of the engine, which passes between the drum and the outer shell and keeps the drum at a certain temperature, just high enough to get all the gas out of the oil. The rotating drum stirs the oil, turns it over and over, carries it in a thin sheet up on the sides of the drum and exposes it to the heat. This is a good method of generating gas from crude oil. By it the gas is generated without an excessive amount of heat, the residue is discharged as soon as the gas is extracted, thereby obviating the necessity of the continuous cleaning heretofore necessary, while it insures a regular uniform supply of gas to the engine. Owing to the difference in cost between gasolene and crude oil in America, and, as it is stated that one gallon of crude oil will develop nearly as much power as a corresponding amount of gasolene, the device is attracting attention.

The Illinois Field.—Activity continues to be displayed throughout the Illinois oil field, which it should be mentioned, is now scattered over twelve counties. During the first week in August, no less than 108 wells were completed in that region, and the new production secured was an average of 57½ barrels per well.

MOTOR MATTERS.



THE *Industrial and Motor Review*, in speaking of the miserable state of some of our country roads, points out that though there are only 100,000 motor vehicles on the road at present, it will not be long before this number is increased to about half-a-million. Thus it is evident by all but the stupidly blind that the immediate question of importance for the whole community is no longer the vehicle but the road.



MOST of the leading men in San Francisco have their own cars, and in Nevada the automobile is used as much in killing the distances of the desert as the camel in Western Australia only ten years ago. Apart from its convenience in affording quick access to distant mines, the motor car is becoming used for transport of freight and supplies; it is destined to play an important part in the development of the waste places of the earth.



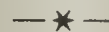
THE British Empire Motor Trades Alliance, Ltd., has received an enquiry from a correspondent in Mexico stating that there is a good demand for small gasoline launches in his district for harbour and river use. The launches at present in use run from 18 to 25, and have from 3 to 16 horse-power motors. British motor launch manufacturers desiring further information are requested to communicate with J. B. King, Secretary, 11, Red Lion Square, London, W.C.



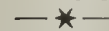
THE German International motor car exhibition is to be held this year from the 1st to 12th November in the new Exhibition Hall of the Berlin Zoological Gardens. Applications for space should be made as early as possible to Baron von Brandenstein, Leipziger Platz, Berlin, W.



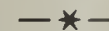
THE Engineering and Machinery Exhibition is to be opened at the Olympia on the 15th inst., and will remain open until the 17th prox.



A NEW heavy motor boat has recently been constructed by Messrs. Hornsby, which is propelled by an internal combustion engine using heavy oil. The boat passed most successfully through recent trials, and maintained a very good speed.



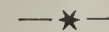
MORE extensions have recently been made to the Wolseley works. It is interesting to mention that when the original building was acquired, people were astounded at such ambitious premises being deemed necessary for a mere motor works. Now, this building which was looked upon as such a large place is but a department.



THE German Emperor will, it is said, open the Berlin Automobile Exhibition to be held in November in person. So far no less than 300 exhibitors have taken space.



THE British Empire Motor Trades Alliance, Ltd., has received an enquiry from a firm on the west coast of Africa for catalogues of marine motors and motor boats.



MESSRS. Iliffe and Sons, Ltd., have just published a well-illustrated and very interesting handbook dealing in a thoroughly practical way with the subject of how to select, maintain and drive an automobile. To those who are brought in touch with the automobile industry we would recommend a careful study of this excellent and remarkably cheap publication. Its price is 1s. 9d., post free, upon application to the publishers at 20, Tudor Street, E.C.



A VISIT TO THE ROUMANIAN PETROLEUM FIELDS.

In order to afford everybody of any importance in Government, diplomatic, industrial and financial circles in Roumania the possibility of acquainting themselves with the Roumanian petroleum industry, the Roumanian journals, the "Independance Roumanie," "La Roumanie," "L'Epoca," and "Le Moniteur du Petrole Roumain," have organised an excursion to visit the petroliferous regions of Pitzgaia, Campina, Calinet, Griusor, Mis-lisora, Bustenari, Stejar, Faget, Recea, Tinta and Baicoi. Special trains will leave Bucarest and Predeal on Sunday, the 2nd September, and both sections of the party will meet at Campina. The Government and the various producing firms are doing their best to make the excursion a success.

RUSSIAN AND ROUMANIAN NOTES.

Fire.—The bore hole of Mr. Grigorescu, at Bustenari, was recently destroyed by fire, and three workmen were badly injured.

Roumanian Activity.—The production of crude oil in the Romanian oil fields continues at a high level. The demand for crude oil is very great and prices are firm.

Profit Sharing.—At the recently restarted case factory of Messrs. Shkhiantz an arrangement has been made to share the profits equally, *i.e.*, half will go to the firm and half to the workmen.

The Colombia Company's Spouter Resumes.—The bore hole of the Colombia Co., which formerly belonged to the Romano Belgian Co., and which was not long ago the scene of an explosion and outbreak of fire, has now been reconstructed and has resumed spouting.

The Bustenari Petroleum Co.—Five years having now elapsed since the formation of the Bustenari Petroleum Co., which is the period fixed for the extinction of the preference shares, the directors announce that the holders of such shares will now receive a final preference dividend of 33.35 francs per share, and their shares will be exchanged for ordinary shares.

One Way of Drilling for Oil.—Near Lianchkuty station, on the Transcaucasian Railway, some unknown persons have drilled a hole into the kerosene pipe line, and set light to the oil. The line and a bridge caught fire, traffic was stopped, and goods trains ceased running, whilst passengers had to change. The service, however, was soon restored.

Debenture Draw.—On August 1st the first drawing for the redemption of debentures of the Steaua Romana took place at Berlin. The total amount of the debentures drawn this year is 210,000 marks or 258,300 francs. They are redeemed at 105 per cent. of their nominal value, which will be paid to the holders on or after the 1st November, 1906.

Petroleum Arrivals at Batoum.—The arrivals of petroleum products at Batoum from Baku continue small, and exporters find it very difficult to carry out their export programmes. The Shkhiantz case factory has recently been re-opened, and turns out 1,500 cases per day. This firm propose to export their product to Turkey and the Balkan States. The exporters are basing great hopes on the coming reductions in the railway rate, which is expected to stimulate the export trade not only to Europe, but also to the Far East.

The Telega Oil Co.—Further reports about the deal between the Italo-Roumanian and the Telega Oil Companies supply the following details. After the Telega Oil Co. has, according to arrangements previously made, been transformed into a Roumanian company, and its capital reduced from 10,000,000 to 8,500,000 francs, the capital will again be increased by 2,000,000 francs, which will be subscribed by the Italo-Roumanian Co. This fresh capital will be used exclusively for extending the boring operations. The management of the Telega Co. will remain in the same hands as before.

A Gigantic Task.—A conference is to be shortly held at the Russian Ministry of Industry and Commerce to adopt measures for bringing the petroleum industry out of its present difficult position. One of the measures already decided upon by the Government is to lease out some of the hitherto undeveloped petroliferous lands, the auction for these being fixed at the beginning of November. The results of this measure can be felt, however, only six to seven months later, after the wells on the new plots have been drilled and equipped, and the conference will therefore have to decide on measures which will bring about more immediate results.

Making Certain of Fuel.—There is now a movement on foot among the shipowners on the Volga to assure themselves of their fuel supplies by acquiring and working their oil fields at Baku. Thus the Kavkaz and Merkuri Co., has already acquired a plot of land on the portion of Bebe-Aibat Bay, which is going to be drained. The Eastern Transport Co. has also been considering the question of acquiring their own oil fields, but in their case their articles of association would have first to be altered with the consent of the Government to permit them to engage in the petroleum producing industry. The Eastern Transport Co. are also large distributors of petroleum products, and therefore for them the question is of greater importance than to other shipping companies.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	11-13
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/9-3/3
Bibi-Eybat " Petroleum Co. ..	£650,000 5½% Pref.	£1	4/9-5/3
Californian Oilfields ..	£250,000 Ord.	£1	5-7
European Petroleum ..	£550,000 Pref.	£1	58-58
" ..	£550,000 Ord.	£1	2/0-3/0
" ..	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	82-85
Schibaieff Petroleum ..	£600,000 Ord.	£1	8/6-9/6
" ..	£575,000 6% Pref.	£5	7/6 8/6
Shell Transport & Trading ..	£575,000 Ord.	£1	2½-2½
" ..	£2,000,000	£1	6/0-7/0
Spies Petroleum Company ..	£1,000,000 Pref.	£10	29/0-30/0
" ..	£312,500	10s.	98-98
			6/9-7/3

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on August 27th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	568	572
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	3,850	3,900
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	138	140
cheff & Co.	250	—	—
Neft Co.	250	—	—
Nobel Bros.	5,000	8,200	8,300
"	250	—	—
Rops and Co., V.	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading	250	—	—
Co.	250	—	—
" (Second Issue)	250	—	—

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 30th August, 1906, as follows:—

Since our report of 17th inst. a welcome change has come over the market, a large amount of business having been transacted, and several important works in the Llanelly district, which have been idle for some months owing to the impossibility of obtaining orders at remunerative prices, have been restarted, and are now working on orders which will keep them employed up to their full capacity well into the end of the year. In addition to this the steel market is in a very strong and flourishing condition, consequently tin plates are again dearer, and it appears pretty certain that they will reach a higher level before the end of the year. We make prices to-day as under:—

1c	18½ × 14	124 sheets	110 lbs.	13/3 to 13/6 per box.
1c	19½ × 14	120 "	110 "	13/3 to 13/6 "
1c	20 × 10	225 "	156 "	18/6 to 18/9 "

F.o.b. Wales. Tin lining and iron hooping extra.

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8½ pd	£199,750	£10	19½
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Burmah Oil, Ord.	£1,100,000	£1	58s. 9d.
Do. Pref.	£250,000	£1	26s. 0d.
Dalmeny Oil Co., Ord. (7. paid) ..	£37,800	£8 10s.	8½
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	20
Do. New (£8 10s. pd.)	£131,750	£10	20
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	6½
(17s. paid)			
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	38s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	74s. 9d.
Do. "B" Deb.	£150,000	£100	147

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	—	80	1,000
Aurora .. (Deb. 5%) ..	—	90½	—
Campina Poiana Mij.	—	39	—
Dordtsche Petroleum Mij. (Pref.) ..	121	122	500
(Deb. 4½%)	102½	102½	1,000
Elzasser Petroleum Mij.	1½	2	1,000
Gaboes	—	19½	—
Holl. Rumeensche Petroleum Mij.	33	34	1,000
Int. Rum. Pet. Mij.	99½	87	500
Java Petroleum Mij. (Ord.)	—	30	1,000
(Pref.)	—	38	—
Koninklyke Nederl. Pet. Mij. Shares	698½	570	250-1,000
" Share certificates	699½	570	1,000
Mœara Enim Petroleum Mij. ..	123½	112½	100
" 1-1,000 Oblig. 5 ..	101½	102	250-1,000
" Moesi Ilir " Petroleum Mij. ..	44½	44	—
Nederl.-Rumeensche Petroleum Mij.	—	17½	—
Nieuwe Ned. Petroleum Mij. And.	—	55½	1,000
Oliebronnen in Hannover Mij. ..	111½	137	—
(Deb. 5%)	98½	99½	—
Panolan Maatschappij Cert. ..	—	355	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	135	135½	1,000
(Common)	118½	115½	—
Sumatra-Palembang Petroleum Mij	79½	71½	50
Zuid Perlak Petrol. Mij. (Pref.) ..	88	88½	—

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THE OIL FIELDS OF RUSSIA AND THE RUSSIAN PETROLEUM INDUSTRY.

A Practical Handbook on the Exploration, Exploitation, and Management of Russian Oil Properties. By A. BEEBY THOMPSON, A.M.I.M.E., late Chief Engineer and Manager of the European Petroleum Co.'s Russian Oil Properties. About 500 pp., with numerous Illustrations and Plates.

London: Crosby Lockwood & Son, 7, Stationers' Hall Ct., Ludgate Hill.

THE PETROLEUM REVIEW,

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SATURDAY, SEPTEMBER 1ST, 1906.

THE MOTE AND THE BEAM.

Why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye?—*St. Matthew, Ch. VII v. III.*

THESE words, which formed the concluding portion of that wonderful sermon on the Mount, should in all fairness be addressed with their fullest force to our friends connected with the Russian petroleum industry in general, and particularly to our contemporary the *Neftiannoie Dielo*, which organ has recently blurted forth in a truly remarkable fashion upon the conduct of the Standard Oil Co. in reference to the American petroleum industry. It is indeed very significant that a journal like the *Neftiannoie Dielo*—the official organ of the Baku Petroleum Association—should pay such a great amount of attention to the hue and cry which has been directed against the Standard Oil Co. in America rather than at this most momentous time in recent history, concentrate all its enthusiasm and force in a sincere endeavour

to uplift the Russian petroleum trade from its present ignominiously pitiable condition. To-day we all know the future of Russia's great petroleum trade hangs, as it were, in the balance. In all the various branches of the country's industry the various factions are fighting each against the other in an almost blind struggle, and like a panic-stricken crowd in a blazing building, not one of them makes progress toward the goal they so frantically attempt to reach. And then as if to negative any slight progress that may be made, the workers are almost continually scheming in order to formulate fresh demands which will bring for a time at all events a period of stagnation upon the whole Russian industry. No sooner is one labour struggle amicably settled than another is decided upon, and so the Russian petroleum industry is constantly passing through periods of chaos and retrogression, to the amazement of all business men who have the welfare of the petroleum trade at heart.

And so it is, just when this feeling of tension is prevailing throughout the many branches of the Russian industry, the *Neftiannoie Dielo* takes pride like the hypocrite of old, after looking to other and far more progressive and successful petroleum producing countries, in sending forth praise because "we are not as others." It may be, of course, that this hypocrisy is not wilful, but the result of ignorance, yet this latter is scarcely credible since the *Neftiannoie Dielo* must be well aware of what is the true nature of things in America as affecting the petroleum industry.

One of the most amazing statements which it seriously put forward is that the American consumer has now to pay an additional 2 to 5 cents per gallon in order to enable the Standard Oil Co. to sell its oil in England under cost price. A more untruthful statement it would be very difficult to imagine, and we have to admit that, though we are in the habit of hearing almost all kinds of accusations against the Standard Oil Co., this is the first time such an argument has been used against that great organisation in America, even by its most open-mouthed opponent. Rather would we argue that the boot is on the other foot, seeing that as every one knows the Russian leading refiners are all combined in order to sell petroleum products to the Russian consumers at enormously enhanced prices. The consequence of this has been these individual refiners have confined their attention to the chief centres of population where the larger trade could be done, and so it comes about that to-day in many parts of Russia wood torches, or, at the best, tallow candles are burned by the peasants. Even where it is possible to procure oil, its cost, apart from the excise duty, is frequently considerably more than in England, and therefore it is placed beyond the reach of the population.

This is a fact which no one conversant with the Russian petroleum industry will gainsay. The official organ of the Oil Producers' Association of Baku may possibly continue to cast around its eye to other countries in order to find some food for controversy, but would it not be infinitely preferable if it concentrated its power in defending the rights of the Russian consumers who have yet to look to those responsible for the

development of the Russian petroleum industry for much.

The argument that the Standard Oil Co. plucks the American consumer in order to sell its oil in England under cost price, is of course absurd. Out of the total quantity of 26,000,000 barrels of refined oil produced yearly in the United States, the Standard Oil Co. handles 23,000,000 barrels, thus leaving 3,000,000 barrels for outside concerns, which goes mainly to satisfy the local demand. Of the quantity handled by the Standard, some 65 per cent. is exported, the remaining 35 per cent. being distributed at home. Thus it is beyond all reason to argue that the Standard Oil Co. can "pluck" the American consumer in order to sell the 65 per cent. of its oil under cost price in the foreign markets. In fact, everything points to the solid tendency for years past being in the opposite direction. If one thing has stood out more prominently than another in connection with the American industry it has been, and still is, that a definite relation always exists between the price of crude and the refined product. Thanks to the remarkable organisation which has brought economy in refining and distribution to a point of perfection, the American consumer is bound to receive his oil at the lowest possible price, while on the other hand, the producer, selling to a mammoth concern which is freed from the difficulties which surround smaller companies, receives a price for the crude product which would be otherwise out of all question. These are not conclusions based upon theory, but are results found in practice.

From facts which are well known to our readers, and from details which we have previously published, it must be obvious that the variations which exist, in regard to the crude oil and its refined product in Russia, cannot by the longest stretch of imagination be said to prevail in America. If our contemporary does sincerely desire to direct attention to this question of the relation of refined to crude oil prices, we admit that it has ample food for comment and even agitation at home, but to criticise the conditions in America, especially in the way it has done, is to picture things that are not, and at the same time ignore things that are. Rather would we suggest that it should first cast out the beam from its own eye, and then it will be able more clearly to see the mote that lies elsewhere.

LONDON OIL SHARE MARKET.

FRIDAY, AUGUST 31ST

The oil share section of the London Stock Exchange continues to be a very disappointing one, day after day passing without the various issues being mentioned.

The only changes on balance are an advance in Californian Refineries to $\frac{11}{16}$ - $\frac{13}{16}$, with a fall of 9d. per share in Baku Preference at 5s. to 6s., and two points in European Debentures at 82-85.

The end-August Settlement, which commenced on Tuesday, 28th, passed off well, there being little business to adjust in Miscellaneous Shares, although the general volume was a good deal in excess of that lately experienced owing to the "boom" in American railways. The Contango Rates charged to continue Oil Shares to the Mid-September Account ruled at about 5 per cent. to 7 per cent., while comparisons of making-up prices from those fixed last time were unimportant. The advances consist of 4½d. in the case of Shell Transport Ordinary at 29s. 9d. and 3d. in Schibaieff Ordinary at 6s. 6d., while Baku Preference lost 3d. at 5s. 6d.; Californian Oil Fields, $\frac{1}{16}$ at $5\frac{5}{16}$, and Russian Ordinary and Preference, 3d. each at 6s. 6d. and 9s. 9d. respectively. Anglo-Russians at 2s., Baku Ordinary at 3s., Schibaieff Preference at 2½ and Spies at 7s. were unaltered.

THE STRIKE AT THE BAKU OIL FIELDS.

NEARING THE END.

The latest news to hand from Baku is that the strike still continues on the properties of Nobel, Rothschild, and the five English companies. The workmen have long ago been paid off, but they nevertheless remain on the properties, making use of the companies' dwellings, fuel and lighting. In order to obtain fuel and light they are themselves working several wells. The majority of the men now recognise the impossible nature of their demands, but the leaders of the movement hold them back from returning to work. They urge that after a two months' strike, to go back to work without achieving anything will deal a blow to the labour movement in general. Apparently, however, work will all the same soon be resumed. The workers' savings are gone, and the shopkeepers have been compelled to give credit under threats. There is also great dissatisfaction among the workmen's wives and children, who insist on work being restarted. Apparently therefore the end is not far distant.

THE PETROLEUM EXPORT INSTALLATION AT CONSTANTZA.

Mr. L. Erbiceanu, Chief of the Government petroleum installation at Constantza, has submitted to the Government a report on the working of that installation, from which the following particulars are taken.

It appears from the report that the Government installations for the storage and exportation of petroleum were rented gradually, beginning from the 27th of May, 1904. These installations at the present moment consist of 16 large storage tanks, of which three were erected in 1903-4, three in 1904-5 and ten in 1905-6. In course of the present financial year three more tanks will be constructed. There are also pumping installations for pumping into the tanks, and from the tanks into tank steamers.

During the year 1905-6 the tanks at Constantza altogether received 48,430 tons of petroleum products, of which 14,238 tons were benzine, 11,949 tons illuminating oil, and 22,243 tons petroleum distillate. The total quantity of various products loaded in tank steamers during the year was 129,090 tons, namely, 27,354 tons of benzine, 38,548 tons of illuminating oil, 54,156 tons of distillate, and 9,040 tons of crude oil. The figure of 129,090 tons represents the total export from Constantza during the financial year 1905-6. The total quantity of oils handled is therefore 177,520 tons.

The total cost of the Constantza installation is 2,000,000 francs, whilst the amount received in rentals and charges in 1905-6 was 184,416 francs.

The charges for the use of the installation are:—

	Fcs.
Rent of tank	8,000 per ann.
Unloading tank waggons and pumping into tanks	0.50 „ ton.
Pumping into tank steamer	0.50 „ „
Unloading tank waggons and pumping direct into tank steamer	0.50 „ „
Pumping from tank back into tank waggons	0.50 „ „
Upkeep of railway facilities	1 per waggon

For the year 1906-7 the charge for handling has been reduced to 45 centimes in accordance with the regulations which provide for a gradual reduction in the rate to 45 centimes if the quantity handled in any year exceeds 160,000 tons, 40 centimes if it exceeds 180,000 tons, and 35 centimes if it exceeds 200,000. It is quite probable that next year the charge will be reduced to 35 centimes, as the quantity to be handled this year is expected to exceed 2,000,000 tons.

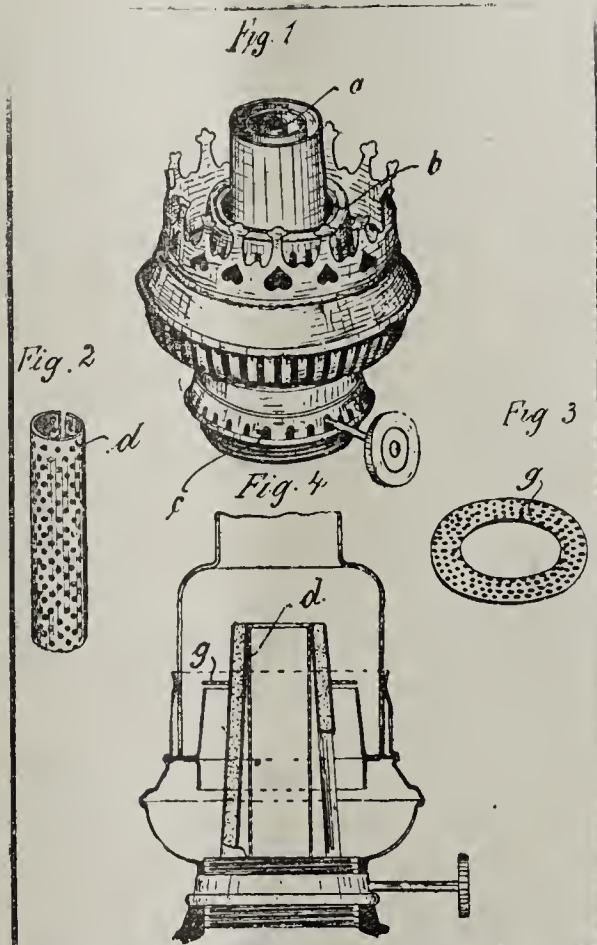
The firms by whom the tanks at Constantza are rented are:—The Steaua-Romana, the Romano-American Co., Credit Petrolifer, Aquila Franco-Romana, and the Trajan Co.

TO GIVE THE SATISFACTORY BURNING OF HEAVIER OILS.

A NEW LAMP BURNER.

Professor Curt Proesdorf, of Altenburg, Germany, has patented an improved petroleum burner, which will enable ordinary lamps usually burning light American oil to burn Russian or other oils on the market of heavier specific gravity with equally good results. Most of the 8-to-16-line round petroleum burners are constructed to burn light Pennsylvanian petroleum, for in former times this was the only oil known on the market.

During the last ten years the petroleum production has developed very largely in various European countries, and Russian, Galician, Roumanian, and lately German illuminating oil, are coming on the market in increasing quantities. The European oils, however, until now would not burn satisfactorily in burners constructed for American oil, owing to their heavier specific gravity, as owing to their different chemical composition they



required a smaller air admission, and stronger air draft than the lighter American oils. The unsatisfactory burning results are further aggravated by the varying and badly-adjusted chimneys, which in all lamps have a great influence on the burning results.

Recognising the shortcomings of the ordinary round burners when used with heavy illuminating oils, certain lamp manufacturers lately provided their 8-to-16-line round burners with an air-draft tube (a) in the burning tube, a closed neck (b), and a broken through upper box (c) (see Sketch 1), and thus created the Reformer burner, which is well adapted for all brands of illuminating oil now on the market.

In order to make it possible for ordinary round burners, of which there are still enormous quantities on the market, to burn heavy oil by transforming them into Reformer burner, i.e., to reduce their air admission and increase the air draft, the present burner inset was constructed, which consists of two parts, the burning tube inset (Sketch 2) and the burning tube ring (Sketch 3). The burning tube inset which is inserted into the burning tube (see Sketch 4, d) in the first place reduces the air supply and increases the air draft, and thus takes the place of inner air draft tube in burning tube. The burning tube ring is put on the burning tube (see Sketch 4, g), increases the air draft, and to some extent replaces the closed neck of the burner.

In the case of some burners both parts of this inset, i.e., inset and ring, have to be fitted in, whilst in others it is sufficient to use, as the case may be either the inset or the ring alone.

THE PETROLEUM FIELDS OF ITALY.

Mr. Wilhelm von Tesinghaus, of Genoa, supplies, in the latest issue of *Naphtha*, the following interesting particulars regarding the petroleum fields of Italy.

Although petroleum has been known to exist in Italy for the last 200 years, there has been little desire shewn to prospect for petroleum in that country, and this is partly due to the fact that in Italy geological investigations in general have not been carried out with the same thoroughness as in other countries. Lately, however, there has been a tendency in Italy to devote particular attention and considerable capital to the development of the petroleum industry. This is largely due to the excellent results attained by the two French companies, who have been developing the petroleum deposits in the province of Piacenza.

The Société de Petroles de Montechino, which was formed with a capital of 1,200,000 lire, and which only began operations in 1898, obtained in the first year a production of 20,600 litres. In 1905, the production reached 6,000,000 litres, and during the current year a production of 10,000,000 litres is expected. The shares of the company, which were issued at 100 lire, are now quoted at 900 lire. During the last few years the company was paying about 50 per cent. dividend.

The Société Française des Petroles et de Forages Artesiens was formed with a capital of 1,300,000 lire. The production of this company is less considerable; during the last few years they were producing at the rate of 2,000,000 litre per annum. The shares of this company, which were likewise issued at 100 lire, are now quoted at 450 lire.

In order to judge the value of the two concerns, it must be borne in mind that the Société Petroles de Montechino has, until now, had only 28 boreholes varying in depth from 40 to 400 metres. It is the opinion of expert geologists that when these wells will be sunk to a depth of about 1,000 metres, as is the case in Galicia, a much larger production will be obtained. This company has concessions of an aggregate of 4,700 hectares, of which they have so far developed only about 500 hectares. All the wells hitherto drilled have yielded oil, which was in every case of a high quality. The crude oil has a specific gravity of from 0.770 to 0.780. It contains 20 per cent. benzine.

Italy has now a petroleum consumption of 2.13 kg. per head of population per annum against a consumption of 16 kg. in England, and 17.24 kg. in Germany. Until now the largest part of the oil consumed in Italy was imported from abroad, chiefly by the Standard Oil Co., of America, which has practically a monopoly on the Italian market. Should the petroleum production in Italy develop at the rate at which it has been progressing, Italy will in time be able to entirely dispense with foreign petroleum.

The above mentioned two French companies have now been amalgamated into one large Italian company, under the title of Petroli d' Italia, Societa Anonima per Azioni, with a capital of 15,000,000 lire, and offices at Genoa and Milan. The properties of the Société Petroles de Montechino were taken over at a valuation of 9,000,000 lire, whilst those of the Société Française des Petroles et de Forages Artesiens were valued at 6,000,000 lire. The new company owns a large refinery, covering an area of 7,000 square metres, and which is connected by rail with the station of Fiorenzuola d'Arda. The refinery receives the crude oil from the wells by means of an underground pipe line several kilometres long. The refinery is capable of producing 1,750 tons of illuminating oil and 300 tons of benzine per month. The company also own a large case factory. A large number of capitalists have taken part in this new enterprise. Generally, interest in the petroleum industry in Italy now seems to be on the increase, and hopes are entertained not only of doing away with the imports of foreign petroleum into Italy, but eventually also to export Italian petroleum to other countries. Some time, however, must elapse before the latter contingency can be realised.

Royal Portuguese Railway Company.

TENDER FOR CREOSOTE.

TENDERS are invited for the supply of 3,000 Tons of Mineral Oil (Creosote) for Timber Traverses Injections.

Tenders will be received at Lisbon until 1st October next.

Full particulars may be obtained at the Company's Office, 28, Rue de Châteaudun, Paris.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO AUGUST 27th, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.
Austria ...	—	876,640	—	366,890	—	71,930	—	—	—	—	—	—	—	—	—	1,326,460
Belgium ...	—	370	32,390	332,540	—	11,000	—	—	—	5,300	—	—	400	2,886	32,790	341,096
Borneo ...	—	270	—	480	—	—	—	—	1,586,150	6,824,400	—	770	—	—	1,587,190	6,825,890
Canada ...	—	—	—	12,800	—	32,400	—	—	—	—	—	—	—	—	—	45,200
Germany ...	818,100	3,750,430	25,570	948,410	—	—	—	—	—	2,380	—	—	1,600	7,890	845,270	4,719,590
Holland ...	440	10,180	—	2,870	—	—	—	—	—	1,290,780	—	271,000	5,400	56,440	5,840	1,630,790
Roumania ...	804,480	3,960,155	—	—	—	—	1,035,880	—	—	1,024,580	—	—	—	—	804,480	6,020,615
Russia ...	2,857,400	25,093,570	481,660	3,017,200	—	—	—	1,604,250	—	5,050	—	—	—	5,660	3,339,060	29,725,730
Sumatra, &c	—	—	—	—	—	—	—	—	—	976,500	—	—	—	—	—	976,500
U.S.A. ...	6,847,330	63,609,857	1,616,280	28,856,004	—	533,553	2,790,700	32,388,540	—	6,844,200	—	10,060,430	90,450	1,169,010	12,357,460	143,451,504
Other Countries	—	1,370	1,810	29,010	—	—	—	—	—	730	1,012,700	—	200	213,730	2,010	244,840
	11,328,020	97,303,052	21,157,710	33,565,724	—	648,883	2,790,700	35,028,670	1,586,150	16,973,920	1,013,470	10,332,440	98,050	1,455,616	18,974,100	195,308,215

MISCELLANEA.

UNITED STATES EXPORTS TO ALASKA AND HAWAII.

The exports of petroleum products from the United States to Alaska and Hawaii during June amounted to 3,148,000 gallons of crude oil, valued at \$65,000; 276,270 gallons of naphthas, valued at \$44,686; 300,614 gallons of illuminating oils, valued at \$50,946; and 28,725 gallons of lubricating oil, valued at \$11,649. For the same period, the domestic shipments from San Francisco included 3,400,000 gallons of illuminating oil, valued at \$150,000.

BAKU PRODUCTION DURING JULY.

According to telegraphic advices from Baku, the total production of crude oil at the oil fields during July amounted to 21,596,221 poods. The largest production was obtained by the following firms:—

	Poods.
Moscow-Caucasian Co.	2,200,000
Caspian Society	1,900,000
Mantacheff and Co.	1,300,000
Pitoeff and Co.	1,100,000
Assadulaeff	1,000,000
Aramazd Co.	1,000,000
Russian Naphtha Co.	900,000
Naftalan Co.	700,000
Baku Naphtha Co.	700,000
Shikhovo Co.	600,000
Zoubaloff	600,000
Caspian and Black Sea Society	600,000
Nagieff	600,000
Ter Akopoff Co.	500,000
Tumaeff and Co.	400,000
Mirzoeff Bros.	300,000
Kavkaz Co.	300,000

CRUDE OIL FOR SMELTING PURPOSES.

The invention of a method by which crude oil may be successfully used for smelting purposes may lead to the early development of the iron ore fields of Llano and East Texas. It is stated that a gentleman residing at Los Angeles has invented a process for using oil in blast purposes instead of coke, and that this invention is now in practical use in the furnaces in California and Arizona. There is no longer any doubt of the practicability of the new method it is said. The fact that oil is cheaper than coke, particularly in Texas, makes the possibility of the new fuel for blasting purposes of the greatest importance.

RAPID FALL OF PRODUCTION IN THE KERN RIVER FIELD.

The current issue of the *Pacific Oil Reporter*, the organ of the Californian petroleum industry, goes into a number of details as shewing the rapid decrease of the production of the Kern River field. It speaks of the Associated Oil Co. having had to receive oil from the Standard Oil Co. for its own use for a long time past, explaining that the Associated Co.'s officials have admitted that large quantities of oil have been "borrowed" from the Standard

for the time being. This has been necessitated by reason of the fact that the production of the Associated Oil Co., and incidentally all other companies in the Kern River field has fallen off tremendously during the past two years, the capacity of the field having decreased by at least one-half. Two years ago it was easy for the field to produce 40,000 barrels per day with the pumps working no more than from ten to twelve hours daily, but now it is almost impossible for a production of 30,000 barrels to be got per day with every pump running during the whole twenty-four hours. The Associated Oil Co. has its object in protecting the Kern River producers from what? Hereby hangs a tale, for it certainly could not have been the Standard Oil Co., since that concern is now assisting it to carry out its contracts.

BATOUM PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum for the week ended August 5th, 1906 (o.s.):—

	Illuminating oil.		Other products.	
	1905.	1906.	1905.	1906.
To Europe	74,000	—	339,000	23,000
To the East	9,000	799,000	2,000	—
To Russian Ports	—	—	6,000	9,000
From Jan. 1st to August 5th:—				
To Europe ..	14,647,000	8,572,000	6,250,000	4,719,000
To the East ..	8,259,000	3,854,000	302,000	38,000
To Russian Ports	1,850,000	1,040,000	131,000	155,000

THE BIBI-EYBAT PETROLEUM CO., LTD.

DEBENTURE HOLDERS' MEETING.

A meeting of the holders of the debentures of the Bibi-Eybat Petroleum Co., Ltd., secured by the trust deeds of December, 1900, and November, 1903, was held on last Tuesday week, at the offices of the company, Bishopsgate Street, E.C.

Mr. J. Annan Bryce, M.P., presided, and moved that a resolution varying the provisions of the debentures as to redemption, fixing November, 1920, as the date for the payment of the principal sum secured, instead of November, 1915, and extending other dates mentioned in the debentures by a period of five years.

Mr. R. C. Antrobus seconded the resolution, and it was adopted unanimously.

Resolutions were also unanimously carried declaring that no dividend should be recommended by the Board in any year prior to 1911, until a cumulative sum of £11,000 per annum had been set aside as a reserve out of the profits of preceding years, this reserve to be used at the discretion of the Board in the purchase of debentures in the open market when they could be obtained at the price of redemption stipulated in the conditions. The trustees for the debenture holders were also authorised to execute a second supplemental trust deed embodying the new conditions.

America and Petroleum Countervailing Duties.

THE PROS AND CONS OF THE CASE.

In our last issue (page 106) we referred to the important question which is agitating the minds of the officials of the Treasury Department at Washington as to the levying of countervailing duties upon petroleum products manufactured in countries which levy no duty upon American products, but from Russian crude, in which country a duty is imposed upon American products.

As we then stated, the Treasury officials sharply dissented from the view held by the Board of General Appraisers. The officials of the Treasury have now set forth their contentions in a memorandum which is shortly to be presented to the United States Circuit Court in an appeal, this memorandum being as follows:—

The collector reports that the paraffin covered by these cases is shewn by the certificates or affidavits attached to the invoices, to be manufactured in Belgium from crude Russian petroleum. The countervailing duty he collected seems to have been one equal to the duty imposed by Russia on similar products imported into Russia from the United States. In other words, he has followed the instructions set out by the Treasury Department in T. D. 25457, and reiterated in T. D. 27170, requiring collectors to take a countervailing duty on products of crude petroleum equal to the duty which the country where the crude oil was produced would impose on the finished product made from the crude oil, and not on the crude oil itself, if such finished product were imported into said country from the United States. It will be observed that the recent decision of the United States Circuit Court of Appeals for the second Circuit, in *United States v. Downing et al.*, decided January 10, 1906 (T. D. 27025), did not cover a case where the collector had made an assessment of duty such as made here. In that case he had taken a duty equal to the duty imposed by the country where the crude petroleum was refined or manufactured into the finished article of paraffin. In view, therefore, of the fact that the case now ruled upon by the board is different from that which was set before the court, the Government's counsel desires to direct the attention of the court to the following considerations:—

Under the ruling of the Circuit Court of Appeals, above mentioned, the country where the oil is refined or manufactured is to be the country considered for the purpose of determining countervailing duty, under the terms of paragraph 626 of the Tariff Act of 1897. The proviso of said paragraph reads as follows:—

"Provided, that if there be imported into the United States crude petroleum, or the products of crude petroleum produced in any country which imposes a duty on petroleum or its products exported from the United States, there shall in such case be levied, paid and collected a duty upon said crude petroleum or its products so imported equal to the duty imposed by such country."

It will be observed that the word "produced" occurring in said proviso is broad enough to refer either to the country where the crude oil is obtained or to the country where said oil is refined or manufactured. In this contention we are supported by the court's decision in T. D. 27025, which is as follows:—

Their decision is based on a construction of paragraph 626, which finds that "Congress did not speak of the origin of the products made from petroleum, but only of the origin of the crude petroleum from which the products were made." We think this construction is too narrow. Evidently Congress wished to protect our own products by providing a countervailing duty against the country which assessed them, and that body recognised that the discrimination to be provided against was not only one which laid a duty upon crude petroleum, but also one which laid a duty upon the products of crude petroleum. It is to be inferred from the use of the four words (petroleum, crude, or refined),

which immediately precede the proviso that Congress intended to include refined petroleum among the products of crude petroleum. If the construction which the board has approved is to be given to this paragraph, it would result that, where crude petroleum produced in a country which laid no duty on our petroleum or petroleum products, was refined in a country which did impose a heavy duty upon our petroleum, etc., it should nevertheless come in free. We are of the opinion that Congress intended no such result, and that it intended to provide that when crude petroleum is imported it shall pay whatever duty is laid upon it in the country where it is produced, and that when any product of crude petroleum is imported it shall pay a duty equal to that imposed upon such product (when coming from the United States) in the country where it is produced.

We are, therefore, obliged to fall back upon general principles of statutory construction in construing this paragraph, and one such cardinal principle is that in construing a doubtful statute it is proper, as laid down by Lord Coke, to take note of the following consideration:—First, what was the law before the act was passed; second, what was the mischief or defect for which the law had not provided; third, what remedy the legislature has appointed; and fourth, the reason for the remedy (*Endlich's Interp. Stat. Sec. 27, and cases cited.*)

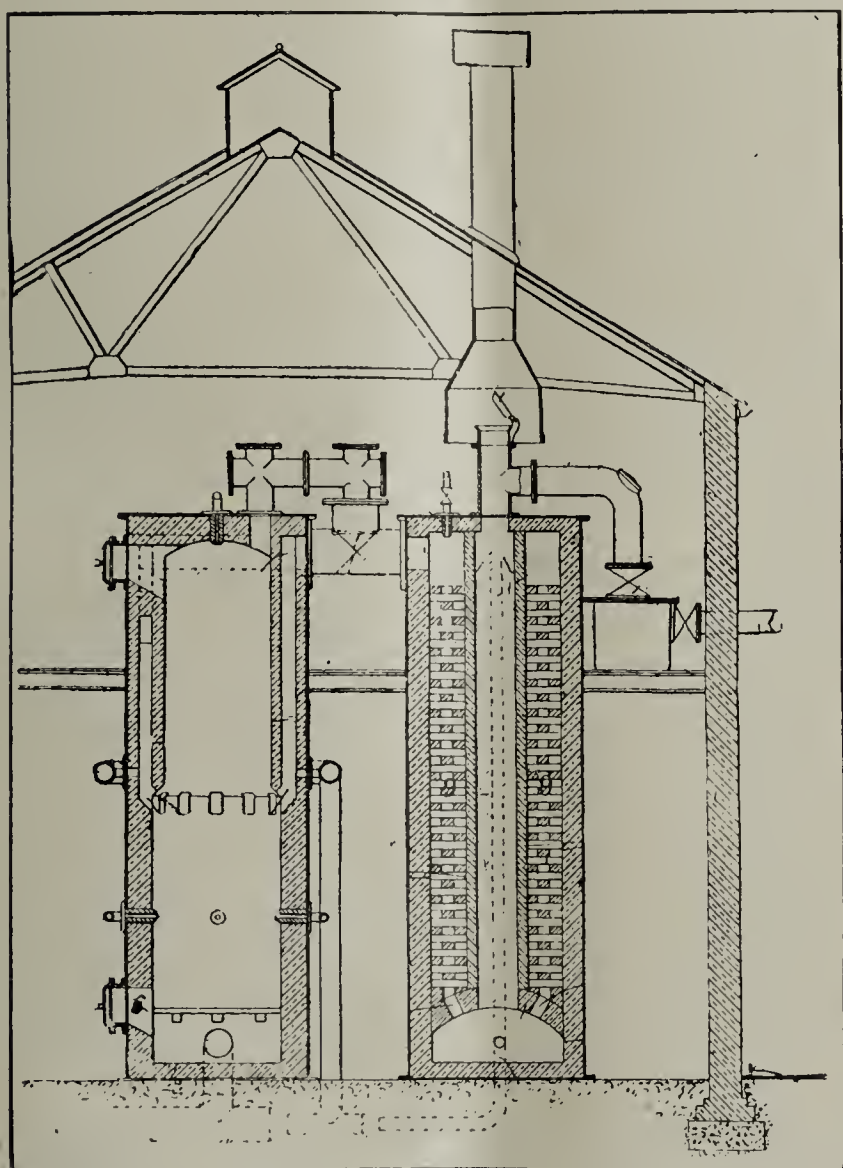
Referring back to the Tariff Act of 1894, it will be found that the proviso to paragraph 568 corresponds generally to the proviso in paragraph 626 of the present act, but it was imperfect in that, it simply provided for a countervailing duty of 40 per centum *ad valorem*. Its language was as follows:—

"Provided, that if there be imported into the United States crude petroleum, or the products of crude petroleum produced in any country which imposes a duty on petroleum or its products exported from the United States, they shall be levied, paid, and collected upon said crude petroleum or its products so imported, 40 per centum *ad valorem*." Evidently when Congress reached paragraph 626 of the present Tariff Act it desired to place the things on a footing of exact equality with other countries in the matter of the importation of crude petroleum and its products. It accordingly used the language we have set out. We cannot suppose that Congress was ignorant of the fact that Russia is one of the great oil producing countries of the world, and, under the rule laid down by the Circuit Court of Appeals, it is quite obvious that if Russia desires to avoid the effect of our tariff laws on the finished products of her oil, it will only be necessary for her merchants to send the crude oil into some country, like Belgium or England, which places no duty on either petroleum or its products. It will then be possible to have the finished products of the oil brought into the United States free. Such a construction of the paragraph would afford no benefit whatever to American labour, and would simply throw into the hands of British and Belgian manufacturers all the profits that might be derived from the refinement of petroleum. An interpretation of the statute which would work any such result is not to be approved unless too clear for doubt.

"There is also a second consideration under the construction adopted by the Circuit Court of Appeals. If Russian oil is sent into Belgium or England, and there refined, the product, when imported into the United States, would be free; yet Russian oil itself, imported crude, directly from Russia, would not be free, but would be subject to a countervailing duty, equal to 30 copecs per pood of 36 pounds (T. D. 26390). It would seem absurd and very inequitable that a highly finished product should be free, while the oil out of which such product was made would be dutiable. The true rule would seem to be that suggested by the Treasury Department, and adopted by the collector in the present case."

THE MANUFACTURE OF GAS FROM COKE, OIL AND TAR.

A patent has recently been granted to Mr. C. B. Tully, 13, Cross Street, Finsbury, London, for an invention which has for its object the manufacture of gas suitable for heating and illuminating purposes in such a way as to admit of the use of a large quantity of tar or other heavy hydrocarbon, which is comparatively cheap, and less oil and coke or other solid fuel, which are comparatively dear, and also to enable a cleaner and better gas to be discharged from the carburetting and superheating portion of the plant than usual. For this purpose, during the preliminary or blowing up stage of the process, air is caused to pass through only the lower portion of the mass of solid fuel in the generator, say,



for example, through about one-half the height of the mass of fuel, which is thereby raised to a state of incandescence, and the resulting combustible gas, after leaving the fuel, is mixed with air and burned in proximity to, but out of contact with, the upper portion of the mass of fuel, as by burning it in a jacket, surrounding such upper portion of the fuel, so as to heat the same to a high temperature without causing combustion thereof. Tar or other heavy hydrocarbon is simultaneously injected on to or into the upper portion of the fuel thus heated, so as to be decomposed thereby, the solid products of the decomposition being deposited in the fuel, and the gaseous or vaporous portion mixing with the combustible gas flowing off from the lower incandescent portion of the fuel, and becoming partially burned therewith, the highly-heated products of incomplete combustion being thence led into the carburetting and superheating portion of the plant, wherein the combustion is completed in the usual way.

After the blowing up stage has been completed, the exit of gas from between the lower and upper portions of fuel in the gas generator is prevented, and steam and tar are injected into the lower incandescent portion of the fuel, and oil sprayed into the top of the carburetting portion of the plant, tar being simultaneously injected on to or into the upper heated portion of the mass of fuel, through which the gaseous products resulting from the decomposition of the steam and tar simultaneously flow in an upward direction, and in which solid products of the decomposition are arrested, the gaseous products of decomposition, passing on together into the carburetting portion of the plant, where it becomes mixed with the products resulting from the decomposition of the oil simultaneously entering that portion of the plant. The injection of the steam and tar may be continued for from six to eight minutes according to the heat of the generator. The tar, in practice, is shut off about one minute or so before the steam, to allow the plant to become clear of tar. In this way a large quantity of tar, and a relatively small quantity of oil, can be employed in the manufacture of heating and illuminating gas of good quality; and, owing to the continuous deposition of solid carbon amongst the coke or other solid fuel in the gas producer, resulting from the decomposition of the tar, the consumption of such solid fuel will be retarded and less of it burned, the result of the improved process being that the cost of manufacture of the gas will be considerably reduced as compared with the ordinary mode of manufacture.

The carburetting and superheating portion of the plant may consist of two chambers, but it is preferred to employ, as shewn in the illustration, a combined carburetting and superheating device, comprising an outer cylindrical casing, and an inner tube of refractory material that is supported at its lower end by a perforated arch or false bottom, and is arranged centrally within the casing so as to form therewith an annular chamber that is charged with firebricks arranged chequerwise.

AMERICA'S PARAFFIN WAX EXPORTS.

The exports of paraffin wax from America during June, as compared with those for the corresponding period of 1905, were as under, the figures being given in pounds:—

Exported to—	1906.	1905.
United Kingdom	5,595,331	4,107,735
Belgium	33,615	42,007
France.. .. .	18,463	117,499
Germany	420,067	274,255
Italy	444,377	522,512
Netherlands	466,631	508,008
Other European Countries.. .. .	400,858	546,985
British North America	222	2,958
Central America and Brit. Honduras	84,820	17,000
Mexico	72,278	145,792
West Indies and Bermuda	2,130	1,400
Brazil	11,017	19,126
Chili	—	—
Other South American Countries.. .. .	30,980	16,505
Japan	2,020,046	1,114,815
British Australasia	813,832	587,718
Other Asia and Oceanica	66,642	327,587
British Africa.. .. .	221,450	334,493
Other African Countries	—	93,520
Total, pounds	10,702,759	8,780,916

JULY IN THE AMERICAN FIELDS.

The developments in the American fields during July were pretty similar in their result to those of the preceding month, but, if anything, there was a slight decline in the number of wells completed. This, however, was counterbalanced by the welcome discovery of a number of wells of the gusher type in the West Virginian districts, and as a natural consequence, the new production was largely increased. During the month, West Virginia was responsible for over half the amount of new production credited to the regions producing Pennsylvanian oil, though the completions were fewer than in south-eastern Ohio, or the Venango-Clarion districts, in Pennsylvania. The new wells at Point Pleasant, in Tyler county, have kept up the yield of the pool in a remarkable manner, and supplied the principal features of interest during the past month. A new 30 foot pool on the borders of the old Mannington district, in Marion county, appeared very promising toward the close of the month, and it is expected that it will open up some new territory in the near future.

In the sections which produce high grade oil, and which include the petroleum regions of Pennsylvania, New York, West Virginia, and South-eastern Ohio, 726 wells were completed during the month, the new production being 6,216 barrels. The dry holes numbered 137, which is a gain of 13 as compared with those encountered during June. At the beginning of August there was slightly less drilling proceeding in the districts than was the case in the early part of July.

During the month only 132 wells were completed in the Trenton Rock oil fields of North-western Ohio and Indiana, and the new production was 1,178 barrels. This was a decrease of 30 wells completed and 427 barrels of new production as compared with June report.

The Hoosier fields completed 126 wells, yielding 2,373 barrels of new production. Compared with the report for June this represents a decline in completions. In the case of the Hoosier fields, however, there was a gain during the month in new production.

From the Illinois field comes news that developments were pushed forward very rapidly during July, and during the month more wells were completed there than in Ohio and Indiana combined. The new production was greater than that of the Mid-Continent field, or that of all the other Eastern fields combined. The wells completed during the month were 435, and the new production was over 15,000 barrels. At the end of the month there was much activity in drilling, and 279 wells were going down.

BATOUM'S TRADE FOR THE HALF YEAR.

The total shipments of petroleum products from Batoum during the first half of 1906, compared to the corresponding period of 1905, were:—

	Six Months, 1906.	Six Months, 1905.
Illuminating Oils—		
Light Kerosene	10,257,009	17,601,801
Kerosene Distillate	—	1,013,790
Solar Oil, light	871,249	1,085,175
Pyronaphtha, Astraline, etc. ..	3,903	—
Lubricating Oils—		
Machine Oil	2,831,226	3 849,417
Machine Oil Distillate	189,492	
Spindle Oil	438,379	
Cylinder Oil	67,054	
Heavy Solar Oil	11,737	
Sabonaphtha, Vaseline, etc. ..	21,811	
Residuals	622,675	115,620
Crude Oil	31,280	—
Goudron, etc.	647	—
Total	15,340,718	23,666,803

A Good Year.—The Actiengesellschaft fuel petroleum industry, of Nurnberg, has in the financial year 1905-1906 earned a gross profit of 455,967 marks, against 455,512 marks in the preceding year. The net profit is 318,920 marks for 1905-1906, against 315,872 marks.

AMERICAN NOTES

Declining Activity.—The decrease in quotations for Mid-Continental oil is having its effect upon operations, which are declining. During the first week this month, the daily average of the runs was 60,106 barrels, as compared with a daily average of 65,000 barrels for July.

A Geological Survey.—Professor Gould, State Geologist of Oklahoma, is at present making a comprehensive survey of the oil fields of that new State, visiting every producing district. In a recent interview, Mr. Gould said that the oil and gas resources will be probably far greater than was at first supposed.

From Tilbury.—According to latest advices, there are now 35 wells in the Tilbury field, and the production is constantly increasing. The Standard Oil Co. are about to lay down a larger pipe line, and also erect a station in the central part of the field. The production at East Tilbury is about 3,000 barrels per week.

In Ohio.—Wiring to the *Oil City Derrick*, a special correspondent says that probably one of the best wells drilled in Wood county for a long time is that owned by Messrs. Hartman Bros. on section 26. The well is located among a number of strippers, but when the drill reached the oil pay the well commenced flowing at a very good rate, and is now settling down to a production of some hundreds of barrels per day.

The Last of the Bell Monarch Company.—A few days ago the property of the Bell Monarch Oil Co., situated in the Wayside Pool of Montgomery county, was sold at a sheriff's sale to satisfy the claim of the State Labour Commissioner. This company was promoted during the days of the American boom, and its property consisted of five wells, producing heavy oil, a pumping plant, drilling rig and leased property.

The Standard Company's Dividend.—The directors of the Standard Oil Co. have declared a quarterly dividend of \$6 a share on the stock of the corporation, which is payable on September 15 next. This means a disbursement of \$6,750,000, the outstanding capital stock of the company being \$97,500,000. Three months ago a dividend of \$9 was declared, while for the same quarter a year ago the declaration was \$6. The company paid a dividend of 40 per cent. in 1905.

A Mid-Continental Pipe Line.—The strenuous efforts which have been made for years past by the Prairie Oil and Gas Co. to keep abreast of the production of the Mid-Continental fields are still being pushed forward. The latest information to hand is to the effect that an eight-inch pipe line is about to be laid from Caney to Tulsa, a distance of 70 miles. The new line will immediately take a most important place in handling the increasing production in the south end of the field.

To Prevent Misunderstanding.—It is reported that as one result of the work of the American Government, the Lake Shore and Michigan Southern Railroad has given notice to independent oil dealers that hereafter their mileage fees for oil-tank cars will be computed on the same basis as the Standard Oil Co. It has been alleged in recent hearings before the Interstate Commerce Commission, at Cleveland, that the railroad company has discriminated against the independent oil companies in this regard.

New Markets Wanted.—There is at present much talk throughout the Mid-Continental fields as to the need for the opening up of new markets in the face of the ever-increasing production. More or less wild schemes of pipe lines are talked of, as well as the erection of independent refineries. It is rumoured that the Gulf Refining and the Guffey Companies are to make some arrangement to utilise Oklahoma crude oil in order to maintain the capacity of their Texas properties, which are now seriously handicapped by the depleted stocks and production.

Water Sands in the Oklahoma Fields.—It is now pretty well established that salt sands lie in connected formations in parallel lines like oil sands in the Oklahoma fields. All the large wells and clean oil production are free from salt water as a rule, and when trouble is met with, it is generally accepted as evidence that the oil sand is edging off. The fact is more noticeable in the country south of Ramona on both sides of the Osage and Cherokee line. The anticlinal fold becomes more marked to the south, and the oil seems to be confined to pools of marked limits and greater rock pressure, the Glenn pool being the most notable instance.

THE AMERICAN PETROLEUM SITUATION.

In a leading article in one of its most recent issues, our contemporary the *Oil City Derrick*, dwells upon the American petroleum situation. In doing so, it says that the world's supply of petroleum was never greater than at the present time, and the United States leads all other countries in the yield of this important article of commerce. It can be confidently asserted that were America the only place on the globe where oil could be produced, America could very readily supply the demand of the whole world. There has been a large increase in the consumption during the past dozen years, but oil discoveries in new and unexpected places have demonstrated the fact that no shortage in the supply can be expected for many years to come.

Probably the greatest work performed by the Standard Oil Co., in connection with the oil industry, has been the constant widening of the markets, and in the discovery of new channels for the use of petroleum. It has reduced the price to the consumer to such an extent that the cost of illumination has been relatively smaller than almost any other article of necessity or luxury that adds to the comforts of modern civilisation. For years the domestic consumer has been supplied with an excellent quality of illuminating oil at an average price the country over, not to exceed 10 or 12 cents a gallon. In foreign lands American oil has been made well-nigh indispensable by affording the humblest labourer an opportunity to obtain an excellent illuminant at a cost commensurate with his daily earnings. It has grappled with the problem of over-production for years, and its agents and representatives all over the world have been constantly on the alert to discover new uses for our surplus and create new markets in countries that are far behind the rest of the world in everything that makes for modern progress and advancement.

But the same old problem confronts the American producer to-day and in a more threatening shape than ever before. And without the aid, assistance, resources and hearty co-operation of the Standard, it is difficult to see how it is going to be satisfactorily solved. With America's foreign trade in danger, because of competition abroad and the insensate attacks upon the Standard at home, the situation is daily becoming more and more complicated, and the outlook appears far from encouraging. While the Eastern oil fields hold out no prospects for an increase in the production, there have been new developments coming to the front in the West that have been responsible for enormous increases in our surplus stocks, and have exercised a depressing effect upon the market.

This journal recently published some estimates in regard to the petroleum output, which shewed a production for the United States of 395,000 barrels a day. Of this amount about 160,000 barrels were classified as fuel oil, which left 235,000 barrels a day to go into manufactures. A large amount of the crude article is being stored up for future use because it cannot be disposed of at a profit. At the present time over 35,000,000 barrels of oil are stored in the Kansas, Lima and Pennsylvania oil districts, and new tanks are being constructed every day to care for the rapidly increasing production. The amount of oil on hand very closely approaches the stocks held by the pipe lines when the Bradford and Allegany oil fields had reached the zenith of their production. These stocks, however, could be transported to the seaboard a great deal more easily and

cheaply than the oil that is now piled up in the districts west of the Mississippi, and which, on the 1st of August, exceeded 21,000,000 barrels. In the following table a careful estimate of the total production of the oil fields of the United States for the month of July is given:—

Kind of Oil.	Barrels.
Pennsylvania	2,350,000
Lima-Indiana	1,960,000
Illinois	1,000,000
Mid-Continent	2,500,000
Texas	1,750,000
California	2,500,000
Colorado, Wyoming, etc.	50,000
Total	12,110,000

This is a total of over 12,000,000 barrels for the month or 389,000 barrels a day. The consumption has also reached enormous proportions. The fuel oil product of California, Texas and Louisiana is in good demand and very little, if any, surplus is being collected at the present time. In the Mid-Continent oil fields and in Illinois different conditions prevail. A surplus of 43,700 barrels a day occurred in the Kansas-Oklahoma oil fields in July, and while the runs averaged 65,000 barrels, it is generally conceded that a production of 100,000 barrels a day could be very readily maintained did the conditions of supply and demand warrant it. In Illinois a yield of from 35,000 to 50,000 barrels a day is expected as soon as pipe line connections are completed and a sufficient amount of tankage can be erected. Indeed it is not beyond reason to anticipate that Illinois, in extent of territory and amount of production, will soon prove a formidable rival to the fields west of the Mississippi river. Its production at the present time is at least double the amount that is shipped away on tank cars. In the Eastern oil fields, the past month witnessed a gain in the net stocks of about 9,000 barrels a day. Only a few months ago the Lima and Pennsylvania stocks were being rapidly reduced. The fact that they now reveal an increase shews the effects of the great gain in the production of Illinois and the Mid-Continent oil fields. While their product is admittedly inferior to the high grade oils of Pennsylvania and West Virginia, a certain proportion of it is available for illuminating purposes, and every barrel manufactured displaces a proportionate amount of the Eastern article.

With an increasing surplus in the Eastern oil fields, as well as the Western, the situation is constantly growing more serious. The Standard Oil Co., with characteristic pluck and enterprise, has furnished the capital and provided the facilities necessary to promote these Western developments thus far, but there is certainly a limit to its endurance, as well as the capital it can command. In the Mid-Continent oil field not only the money necessary to build the tanks and construct connecting pipe lines had to be provided, but the money had to be forthcoming every day to pay for the oil, with which the tanks are filled. So far these Western investments have been entirely a matter of faith in the future, and it is a constant case of more capital being required all the time. The returns from the oil shipments are comparatively small and in the meanwhile evaporation of oil and interest on the money are eating into the capital night and day.

Producers are likewise pushing ahead in Illinois and extending the developments, with little or no regard to

the oil market or the conditions of supply and demand. The landowners are reaping a harvest out of big bonuses, even if they have no opportunity to receive royalties from the sale of the oil produced on their farms. While these facts are perfectly familiar to the oil producers, the general public is kept agitated by constant efforts on the part of the Government and self-interested politicians to harass the Standard Oil Co. and drive it out of business. It is continually placed in the light as making warfare upon something or somebody, while at the same time, the fight is all on the other side. Compelled to make an active defence and meet all kinds of foreign competition, subject to defamation and abuse on the part of those who should be its friends and protectors, it still keeps up the struggle to maintain the prestige of the American oil industry at home and abroad, and enable thousands of oil producers and working men to earn and achieve a competence, and live comfortable and happy lives.

THE UNION OIL COMPANY AND CALIFORNIAN DEVELOPMENT.

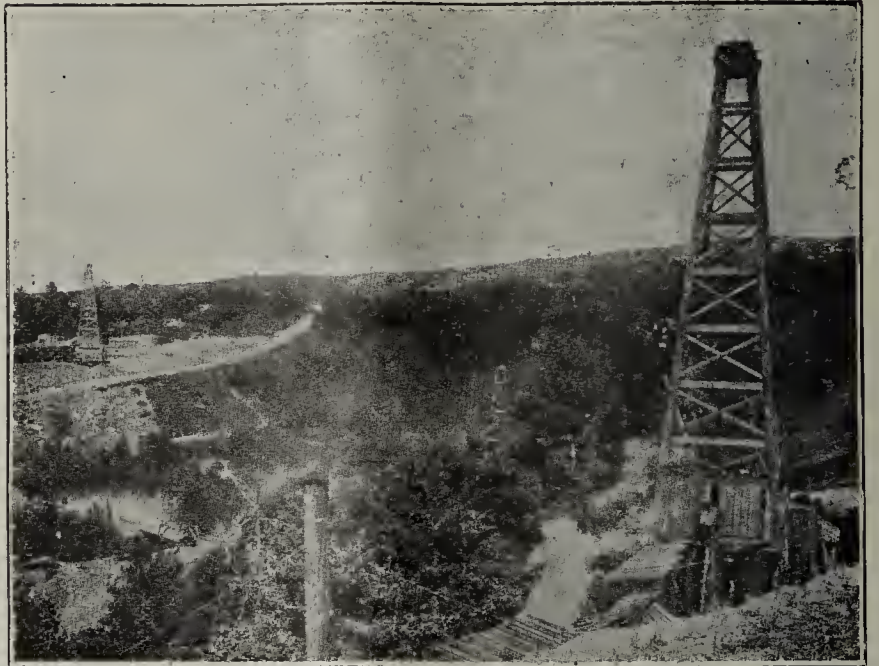
By reason of its now mature plans for operating in the English markets, more than passing interest will attach to the operations of the Union Oil Co., of California, in the Santa Maria field where, as our readers are aware, the company possesses large holdings. The current issue of the *Pacific Oil Reporter*, in reviewing the developments in this field for the first half of the present year, records the fact that the Union Oil Co. is the most important of consideration. The Santa Maria field is unique in having its oil in both shallow and deep strata, and a very large amount in the lower, deeper strata. This body of oil lies between 2,500 and 3,500 feet from the surface, and in some cases even deeper. Consequently, drilling has been rendered very expensive, and the result of this has been that companies with a small amount of capital have been prevented entering the field.

One decided advantage which the Santa Maria field has over others, notwithstanding the great cost of its wells, is that of its close proximity to tide water at a good port. The Union Oil Co.'s field—for the company enjoys a situation that gives it almost complete control over the Santa Maria region—is about 36 miles from Port Harford, with an elevation that enables the oil to gravitate from the field to the port without being pumped. Two pipe lines are already established to Port Harford, and three others to the various railroads, while pipe for two more separate lines is about to be laid.

It is only by the following of a fortunate and far-sighted policy that the field to-day is practically owned by the Union Oil Co. Four years ago, the Western Union Oil Co. with a few shallow wells, and the Pinal Oil Co. on the opposite anticline, with but one well, constituted the field. The following year the Union Oil Co. took in the situation. They found the field to be one for the production of heavy oils. The company's field manager concluded that the Santa Maria anticline, where the Pinal Co. had by this time got three wells, was the better territory. The dip of the Western

Union, though since shewing some good wells at its northern end, shewed a very rapid descent of its anticline as the territory sloped southerly. Lease after lease was acquired by the Union Co., in what proved with the single exception of the Pinal Co.'s holdings, to be the cream of the territory. Three other tracts have since been bought up by the company, while quite recently they have purchased the Newlove Ranch tract, said to be the largest single tract of proven oil land in the world.

At Port Harford, or rather easterly of San Luis Bay,



ON THE COMPANY'S PROPERTY.

the Union Co. has secured a sea-board site with storage lands adjacent, and has arranged with San Luis Obispo county for a common wharf, which will be totally independent of other oil companies, and in addition at Orcutt, six miles south of Santa Maria, close to the developed portion of their territory, the company has established quite a town.

As is now well known, the Union Oil Co. has its own and very extensive shipping facilities, and is doing its own marketing, independent of all comers. It has developed well after well, and has adopted the plan of shutting down all wells when the oil is not demanded, so that to-day there is little over half-a-million barrels in storage, even including that in the receiving tanks over the whole Santa Maria field.

MR. HERBERT ALLEN AND THE "PETROLEUM REVIEW."

With reference to our remarks in the last issue of the REVIEW, we have received a letter from Mr. Herbert Allen which is even more remarkable than the former letter addressed to us. Mr. Allen, by way of justification, states that in forwarding the report to us for publication for 2½ guineas he was "following a practise long common between public companies and newspapers of every class." Whatever this practice amounts to, we can only say that we are astonished to hear that it is possible for a director of a public company, merely for the sake of self aggrandisement, to gain publicity through "every class of newspaper" by the payment of any sum of £ s. d. he thinks fit to offer.

The American Oil Market.

New York, Week ended August 18th.

The increase of nearly 300,000 barrels in the stocks of oil held in the Northern fields may be regarded as a bearish feature of the pipe line reports for July, but when the very large production in the Illinois and the Mid-Continent fields is taken in connection, it is recognised that weakening in the price of the lower grade oils is a natural sequence. The stocks of these oils are accumulating, and there is fear among producers that prices will go still lower. The decrease in the deliveries of over 800,000 barrels of the Lima grades is accounted for by the use of oils from the newer States, these coming into direct competition, and will hereafter have to be considered in estimating the production and consumption of crude oil. Considering, therefore, the situation as a whole, the outlook for the producer is not over hopeful, and lower prices are to be expected. The producers of the high grade oils, however, contend that as their product is distinct and contains valuable products not obtained from the other it should not be affected by the over-production of the Lima or equivalent grades, especially in view of the fact that the production cannot be increased to a material extent. The reports from the producing districts during the past week have shewn a larger number of completions, says the *Oil, Paint and Drug Reporter*, and the results have also been somewhat better in that quite a number of wells have been reported shewing large initial production, and the average of the week's wells was considerably higher. The percentage of dry holes reported was also somewhat smaller, and the week, as a whole, has therefore proved more satisfactory than any previous one for a long time. From the Mid-Continent fields the reports indicate a steady production, though there appears to be somewhat less activity in the search for oil. In Illinois there is no cessation in the feverish endeavour to secure territory, and it is expected that drilling operations will be greatly extended, the belief being that the productive area is much larger than at first supposed, and a large increase in production is predicted. In the Texas and Louisiana fields an average amount of development work is in progress, but the production appears to be decreasing, the output of the older wells declining steadily. There has been no further change in the price of Texas crude.

REFINED AND PRODUCTS.—The demand for refined for export during the past week has been active, and shews further increase, believed to be attributable to the recent reductions in the prices of export oil. The engagements during the past week foot up about 380,000 barrels, all for shipment in bulk. There is no change in the situation abroad, although it is said the stocks had been allowed to run unusually low, and the heavier engagements this week are, in part, attributed to this.

The price for barreled oil remained steady at 7.60c. for New York loading, and at 7.55c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are firm at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel.

Cases for export have been in good request, and sales of about 275,000 are reported. The price of plain tops has been steady at 10.10c. Freight rates are firm.

Crude for export has been in light request, and sales of about 25,000 barrels are reported. Pennsylvania crude is quoted at 7.60c. in barrels.

Crude naphtha continues firm. For export, sales of 1,000 barrels have been reported.

CLOSING QUOTATIONS.

CRUDE.		Week ended	
		Aug 11.	Aug. 18.
		1906.	1906.
National Tran, Certificates	per bbl.	\$1.58 @ 1.59	\$1.58 @ 1.59
Pennsylvania crude in bbls.	per gal.	7.60	7.60
Pennsylvania crude in bulk	.. ..	4.50	4.50
Residuum, bbls. for export	.. ..	6 @ 6½	6 @ 6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Aug. 18.	Aug. 18.
		1905.	1906.
Tiona .. ..	.. ..	1.42	1.68
Pennsylvania .. ..	.. ..	1.27	1.58
North Lima .. ..	.. ..	0.86	0.92
South Lima .. ..	.. ..	0.81	0.87
Indiana .. ..	.. ..	0.81	0.87
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.26	1.34

REFINED—FOR EXPORT.

		Week ended	
		Aug. 11.	Aug. 18.
Cargo Lots for export..	per gal. ..	7.60	7.60
In bulk .. ..	.. ..	4.50	4.50
Philadelphia loading ..	.. ..	7.55	7.55

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Aug. 11.	Aug. 18.
5,000 to 10,000 .. ..	.. ..	10.15	10.15
1,000 to 5,000 .. ..	.. ..	10.30	10.30

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Aug. 11.	Aug. 18.
120 fire test, S.W. ..	per gal. ...	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13	13
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	12½ @ 13½	12½ @ 13½

NAPHTHA AND GASOLENE.

		Week ended	
		Aug. 11.	Aug. 18.
Naphtha, crude, car lots, 68 @ 72 deg.		—	—
Gasolene 86 deg. .. ..	.. ..	22.00	22.00

PENNSYLVANIA OIL RUNS from Aug. 10th to Aug. 16th were:—Aug. 10th, 77,135; Aug. 11th and 12th, 116,753; Aug. 13th, 47,553; Aug. 14th, 75,945; Aug. 15th, 78,197; Aug. 16th, 68,208. For the month of July, 2,269,772.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—81,069; 127,686; 87,195; 63,077; 60,815; 58,824. For the month of July, 2,246,206.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended August 17th and from Jan 1, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	386,400	7,314,500	7,681,300
Refined, cases	270,000	9,684,000	14,132,000
Crude, barrels and bulk ..	27,500	1,072,500	692,600
Crude, cases	—	285,000	152,000
Naphtha, barrels	800	249,800	367,000
Residuum, barrels	24,500	564,200	613,500
Lubricating, barrels	700	210,100	98,500
Total, barrels cde. eq. ..	751,786	15,557,521	17,221,427

CLEARANCES FOR THE WEEK.

During the week ended August 17th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	13,223,240	289,825,639	323,610,451
Crude	—	232,900	924,344
Naphtha	46,150	13,112,069	9,517,063
Residuum	2,000	3,612,000	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Aug. 17th ..	17,630,987
Total from New York, from Jan. 1, 1906 ..	387,350,420
Same period last year	433,004,948
Decrease	45,654,528
From United States, week ended Aug. 17th ..	39,428,007
Total from United States, since Jan. 1, 1906 ..	754,148,803
Same period last year	795,576,681
Decrease	41,427,878

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The "Review" Shipping List.

AUGUST 30, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE ..	La Pallice ..	Philadelphia	L. Aug. 12	GUT HEIL	Havana	New York ..	L. Aug. 18
ALCHYMIST	Bordeaux ..	Smyrna	At Malta,	HAINAUT (Dch.shp.)	Ibrail	Antwerp	Arr. Aug. 18
			Aug. 25, 26	HARRY	La Plata	Port Arthur	L. Barbadoes,
AMERICAN	New York ..	Antwerp	Arr. Aug. 24	WADSWORTH		(Texas)	Aug. 4
APPALACHEE	Yokohama ..	San Francisco	Arr. Aug. 1	HELIOS	Philadelphia	Christiania..	P. Butt of Lewis
APSCHERON	Antwerp	Batoum	Cl. Constant'ple.				Aug 22
			Aug 21	HOTHAM	Ibrail	Cette and	At Cette,
ARAL	Tyne	Philadelphia	P. Cape Race,	NEWTON		Rouen	Aug. 28
ARAS	Blyth	Hamburg ..	Aug. 25	HOUSATONIC	San Francisco	Shanghai and	At Shanghai,
ARGYLL	Honolulu ..	Monterey	L. Aug. 25			Hankow	about Aug. 8
		(Cal.)	Arr. Aug 5	IMPERIAL	—	—	Tr. on Lakes btr
ASTRAKHAN	Tyne	Philadelphia	P. Dunnet Hd.,	JOANNIS COUTZIS	Calais	Batoum	U.S. and Can.
			Aug. 26				At Piraeus,
AUGUST KORFF..	Bremerhaven	New York ..	P. Dunnet Head	J. B. AUG. KESSLER	Rotterdam ..	Philadelphia	Aug. 19
			Aug. 28				P. Prawle Pt.,
AUREOLE	Manchester	Philadelphia	Arr. Aug. 26	JAMES BRAND	Tyne	Philadelphia	Aug. 22
AZOV	—	—	Trading on W.C.	KURA	Kustendje ..	Dublin	Arr. Aug. 22
			of South Amca.				Arr. Constanti'le,
BAKU STANDARD	Philadelphia	Venice	L. Algiers,	LA CAMPINE	Antwerp	Philadelphia	Aug. 23
			Aug. 23				P. Scilly,
BALAKANI	Philadelphia	London	Arr. Aug. 27	LA FLANDRE	Ghent	Philadelphia	Aug. 28
BATOUM	Manchester	Port Arthur	P. Sand Key,				Sp., by Argus,
		(Texas)	Aug. 28				which arrived at
BAYONNE	Tyne	New York ..	P. Dunnett Hd.,	LA HESBAYE	New York ..	Antwerp	Q'stown Aug. 27
			Aug. 28	LA MADALIENE ..	Leghorn	Tunis	L. Aug. 14
BEACON LIGHT ..	New York ..	Venice	L. Aug. 22	LA VIGUESA	Philadelphia	Vigo	Arr. Aug. 16
BEME	Rangoon ..	Bombay	L. Aug. 24				P. Del. Break.,
		& Beypore		LACKAWANNA	Philadelphia	Tyne	Aug. 19
BLOOMFIELD	Bombay	—	P. Gibraltar,		& Avonm'th		Arr. Aug. 28
			Aug 23, 24	LE COQ	Tyne	Philadelphia	L. Aug. 25
BORJOM	Batoum	Alexandria..	Arr. Aug. 20	LOUTSCH	Messina	Novorossisk	Arr. Constanti'le,
BRILLIANT	Philadelphia	Gothenburg	P. Dunnett Hd.,				May 5
			Aug. 22	LUCERNA	Philadelphia	Barrow	Arr. Aug. 30
BROADMAYNE	Rouen	Tyne	Arr. Aug. 29	LUCIFER	Philadelphia	London	Arr. Aug. 25
BULLMOUTH	Balekappan	Shanghai ..	Arr. Aug. 14	LUCIGEN	Tyne	Philadelphia	P. Dunnet Hd.,
BULYSESSES	Cardiff	Balekappan	P. Barry Island,				Aug. 20
			July 11.	LUCILINE	Cette	Kustendje ..	P. Dardanelles,
BURGERMEISTER	Tyne	Philadelphia	Arr. Aug. 27				Aug. 23
PETERSEN				LUMEN	Philadelphia	Marseilles ..	P. Del. Break,
CADAGUA	Philadelphia	Seville	Arr. Aug. 21				Aug. 18
	and Alicante			LUX	Novorossisk	Havre	Arr. Aug. 24
CALCUTTA (Br. bq.)	San Francisco	Shanghai ..	L. Aug. 15	MAKKAVEI	—	—	Trading in Black
CARDIUM	Barrow	Cardiff	P. Barry Island,				Sea
			Aug. 29	MANHATTAN	Kustendje ..	Savona	Cd. Constanti'le,
CAUCASIAN	Philadelphia	Liverpool ..	Arr. July 12				Aug. 24
	and Cardiff			MANNHEIM	Philadelphia	Copenhagen	P. Butt of Lewis,
CHARLOIS	Philadelphia	Amsterdam	Arr. Aug. 17				Aug. 25
CHESAPEAKE	London	Tyne	Arr. Aug. 11	MARGARETHA ..	Genoa	Tunis	L. Aug. 20
CHESTER	Antwerp	New York ..	Arr. Aug. 24	MEXICAN PRINCE	Liverpool ..	Porto Rico..	Arr. Aug. 22
CIRCASIAN	—	—	Trading on W.C.	MIRA	Muronan ..	Suez	L. Aroe Bay,
PRINCE			of South Amca.				Aug. 14
CLAM	Singapore ..	—	L. Aug. 15	MUREX	Rangoon	—	L. Aug. 16
COWRIE	Batoum	—	L. Suez,	NARRAGANSETT..	London	New York ..	P. Lizard,
			Aug. 20				Aug. 23
CYMBELINE	Barry	Philadelphia	Arr. Aug. 27	NERITE	—	—	Tr. in China
CZAR NICOLAI II.	Hamburg ..	Batoum	Off I. of W.,				Seas
			Aug. 28	NEW YORK	New York ..	Southampton	L. Aug 25
DAGHESTAN	Batoum	Liverpool ..	P. Gibraltar,	OCEAN	Philadelphia	Amsterdam	P. Del. Break,
			Aug. 25, 26				Aug. 20
DAKOTAH	San Francisco	Hong Kong	Arr. July 25	ORANJE PRINCE..	Hull	Mangalia ..	P. Lizard,
DELAWARE	Manchester	New York ..	P. Eastham,				Aug. 27
			Aug. 25	ORIFLAMME	Rouen	Philadelphia	Arr. Aug. 18
DEUTSCHLAND ..	Hamburg ..	New York ..	P. Dunnet Hd.,	OSCEOLA	Brunswick &	Rio Janeiro	P. Cape Henry.
			Aug. 22		Norfolk (Va.)		July 8
DIAMANT	New York ..	Swinemunde	L. Aug. 24	OTTAWA	Philadelphia	Vera Cruz ..	L. Tampico,
ELAX	Tientsin	—	L. Aug. 11				Aug. 11
ELISE MARIE	Rotterdam ..	New York ..	P. Prawle Pt.,	OURAL	Batoum &	Antwerp	Arr. Aug. 25
			Aug. 27		Dunkirk		
ENERGIE	Danzig	Philadelphia	P. Dunnet Hd.,	PALEMBANG	—	—	Tr. Sts. Settlem'ts
			Aug. 22				& China Seas
ERIVAN	Tyne	Batoum	P. Sagres,	PAULA	Philadelphia	Carlshamn ..	Arr. Aug. 23
			Aug. 26	PECTAN	Port Arthur	Copenhagen	P. Southend,
EUPLECTELA	Tyne	Philadelphia	Arr. Aug. 23		(Texas)		Aug. 27
EXCELSIOR	New York ..	Hamburg ..	L. Aug 19	PENNOIL	Tyne	Philadelphia	Arr. Aug. 26
EZIO	—	—	Coasting Peru	PERLAK	Palembang	Swatow and	L. Singapore,
FRANCE MARIE ..	Alicante	Philadelphia	L. Aug 18			Tamusi	July 28
GEESTEMUNDE ..	Stettin	New York ..	P. Dunnet Hd.,	PHOEBUS	New York ..	Hamburg ..	P. Beachy Head,
			Aug. 19				Aug. 29
GENESSE	Philadelphia	Manchester	Arr. Aug. 22	PINNA	Manchester	Port Arthur	L. Aug. 28
GEORGIAN			P. Dunnet Hd.,			(Texas)	
PRINCE	Manchester	Philadelphia	Aug. 17	POTOMAC	Plymouth ..	Tyne	Arr. July 16
GOLDMOUTH	Cardiff	Singapore ..	Arr. Aug. 8	PROMETHEUS ..	Rotterdam ..	New York ..	P. Lizard,
							Aug. 26

Vessel.	From.	For.	Latest Date and Position.
PRUDENTIA	Rouen	Middlesbro'	Arr. July 24
RION	Batoum	Manchester	L. Aug. 24
ROCK LIGHT	Kustendje ..	Dover	Arr. Constanti'le, Aug. 22
ROSSIJA	Novorossisk	Hamburg ..	Arr. Constanti'le, Aug. 24
ROTTERDAM (Now C. F. Tietgen)	New York ..	Rotterdam ..	Arr. Aug. 28
RUSSIAN PRINCE SALAHADJI	Boston	Philadelphia	L. Aug. 20
	—	—	Tr. Sts. Settlem'ts & Java Seas
SEMINOLE	Calcutta	San Francisco	Arr. Aug. 29
SILVERLIP	Samboe	—	L. Aug. 4
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Newport	Philadelphia	P. Barry Island, Aug. 28
SOPHIE	Batoum	Venice	Cd. Constanti'ple, Aug. 24
SPONDILUS	Samboe	—	L. July 16
STANDARD	Stettin	Philadelphia	P. Tyne, Aug. 25
STROMBUS	Cardiff	Singapore ..	P. Barry Island, Aug. 23
SURAM	Penarth	Trieste	L. Aug. 29
SUWANEE	Barrow	Tyne	Arr. Aug. 10
SVIET	Batoum	Odessa	L. June 1
TELENA	Hankow	—	L. Aug. 13
TEREK	Batoum	London	P. Lisbon, Aug. 28
TIFLIS	Batoum	Antwerp	At Thameshaven, Aug. 29
TIOGA	Manchester	New Orleans	Arr. Aug. 19
TONAWANDA	San Francisco	Hong Kong	Arr. Aug. 15
TROCAS	Calcutta	Soesoe	Arr. Aug. 10
TURBO	Hamburg ..	Philadelphia	P. Lizard, Aug. 19
TUSCARORA	San Francisco	Kurrachee & Bombay	L. July 4
TWINGONE	Rangoon	Cocanada ..	L. Aug. 21
VEDRA	Tyne	Batoum	P. Sagres, Aug. 21
VILLE DE DIEPPE	Dieppe	Havre	Arr. Apr. 26, in pt. Aug. 23
VILLE DE DOUAI	Ibrail	Campana ..	P. Zea, Aug. 19
VOLUTE	Newcastle (N.S.W)	—	P. Goode Island, Aug. 21/28
WEEHAWKEN	Philadelphia	Manchester	L. Aug. 20
WILLKOMMEN ..	Philadelphia	Stockholm ..	P. Butt of Lewis, Aug. 28
WINNEBAGO (late Kinsman)	Shanghai ..	San Francisco	Arr. Aug. 30

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

August 31st, 1906.

The latest quotations for Refined Petroleum are as follows:—Russian and Roumanian, 6½d.; American, 6½d.; Water White, 7½d.

LUBRICATING OILS

are unchanged as follows:—

- American pale, £7 to £9 10s.
- American dark cylinder, from £7 2s. 6d.
- American filtered cylinder, from £11.
- Shellene, £5.
- No. 1 Russian, £10 7s. 6d.

TURPENTINE.

Since our last report Turpentine has been very firm, having reached as high as 46s. 9d. for Spot, and up to the end of the year. At the moment of writing, Spot is quoted 44s. 6d., and September to December, 44s. 9d; for the first four months of next year however the quotation is 1s. dearer, namely, 45s. 9d.

LIVERPOOL OIL MARKET.

August 31st.

Refined oils are quiet, and sellers now quote 5½d. for Russian, Galician or Roumanian; and 6½d. to 7½d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

New York, August 31st.

Refined, in cases, is easy at 10'30; Standard White, 7'60; Credit balances, 1'58c.

PHILADELPHIA, August 30th.

Standard White is still quoted at 7'55.

RUSSIA.

BAKU, August 29th.

The Baku oil market is very strong. The prices are: Light crude oil, spot, 33 to 34 copecs per pood; residuals in ships, spot, 35½ copecs; kerosene 40 copecs per pood.

BELGIUM.

ANTWERP, August 22nd.

The petroleum market is unchanged. Price of Standard White, spot, 19½ francs per 100 kilos.; and four last months of the year 20 francs.

FRANCE.

PARIS, August 22nd.

Illuminating oil is quoted in bulk, in whole tank waggons, 20'25 francs per hectolitre; spirit, 25'25 francs per hectolitre. Special white oil, 28'25 francs per hectolitre.

GERMANY.

HAMBURG, August 27th.

The kerosene market is firm. The price of American Standard White is 7'10 marks per 50 kilos.

ROUMANIA.

August 16th.
Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs.	...	3'70-3'80
Refined oil, exclusive of taxes	...	9'00- —
Motor benzine, including taxes	...	16'00-18'00
Benzine, doubly refined	...	24'00-25'00
Residuals in tank waggons, at refinery	...	3'00- —
Paraffin	...	120'00-125'00
Lubricating Oils—		
Agricultural...	...	30-32
Prime	...	35-37
Extra	...	40-42
Royal	...	45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilo

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7'00
Benzine, sp. gr. 0'710-0'715	11'00-12'00
" sp. gr. 0'720-0'725	8'00- 9'00
" sp. gr. 0'735-0'760	6'00- 7'00

INDIA.

BOMBAY, July 20th.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—	
American, "Snowflake," 150 deg.	Rs. 6 0 2
" Chester, 125 deg.	4 8 2
" Monkey Brand, 125 deg.	4 2 2
" Bulk, 125 deg. (in local made tins) ..	3 10 0
" 125 deg. (8 Imperial gallons)	3 0 0
" "White Camelia" brand, 125 deg.	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—	
Burmah oil, in tins, per pair	3 2 0
Borneo oils, in tins, per pair	3 2 0
Sumatra "Rising Sun," bulk, per unit	3 0 0
" tins, per pair	3 10 0
Silverlight cases, per case	4 8 0
Russian, "Anchor," cases	4 14 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED AUGUST 20TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Aug.	LONDON—			
14	Anglo-American Oil Co.	.. Lub.	49,800	New York
14	G. W. Sheldon and Co.	.. "	1,080	"
14	Mordaunt Bros.	.. "	8,000	"
14	"	.. "	28,000	Philadel.
15	Anglo-American Oil Co.	.. "	68,400	"
15	A. Brown and Co.	.. "	4,800	"
15	Humphrey and Co.	.. "	4,430	New York
15	W. Balchin	.. "	10,240	Hamburg
16	Vacuum Oil Co.	.. "	420	"
17	J. A. Paul and Co.	.. M.Colza	200	Boulogne
17	Asiatic Petroleum Co.	Benzine	582,800	Pulo Samboe
	(Cardium)			
17	"	.. Liq.Fuel	770	"
17	General Petroleum Co.	Lamp	364,480	Constantza
	(Pinna)			
17	Anglo-American Oil Co.	.. "	2,751,580	New York
	(Narragansett)			
17	"	.. Lub.	261,840	"
17	Ragosine and Co.	.. "	5,240	Philadel.
18	Mordaunt Bros.	.. "	5,500	"
18	Juett and Cain	.. "	2,400	"
11	Schliemans Oil Co.	.. "	12,400	Galveston
18	London Oil Storage Co.	.. "	2,750	Hamburg
20	"	.. "	400	"
20	J. T. Lyon and Co.	.. Turps. Sub.	400	Antwerp
20	G. W. Sheldon and Co.	.. Lub.	390	"
20	J. Harrison, Ltd.	.. "	400	Treport
20	G. L. Gerharat	.. Lub.Gr.	1,200	New York
20	Mordaunt Bros.	.. Lub.	4,000	"
20	G. W. Sheldon and Co.	.. "	1,400	"
20	Grindley and Co.	.. "	1,000	Philadel.
	LIVERPOOL—			
16	Vacuum Oil Co.	.. "	5,600	"
16	Worthington and Boler	.. "	800	"
17	Meade-King, Robinson & Co.	.. "	2,400	Baltimore
17	"	.. "	27,000	Philadel.
17	A. Hopps and Sons	.. "	10,430	"
17	Crew, Levick and Co.	.. "	12,680	"
17	George B. Taylor	.. "	21,000	"
17	"	.. "	103,000	New York
17	Phillips, Sons and Co.	.. "	800	Hamburg
18	W. B. Dick and Co.	.. "	16,880	New York
18	"	.. "	8,090	Philadel.
18	Anglo-American Oil Co.	.. "	278,600	"
	(Delaware)			
18	"	.. Lamp	611,000	"
20	Crew, Levick and Co.	.. Lub.	5,170	Baltimore
20	W. Gibson and Co.	.. Lamp	2,050	Boston
20	Pickford's, Ltd.	.. Lub.	1,120	Hamburg
	BRISTOL—			
14	Pickfords	.. "	650	"
16	H. Pritchard and Co.	.. "	1,030	Antwerp
16	Pickfords	.. "	280	Hamburg
20	H. R. James and Sons	.. "	5,200	New York
20	Anglo-Bosphorous Oil Co.	.. "	2,000	Hamburg

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.	GRIMSBY—			
16	J. Sutcliffe and Sons	.. Lub.	360	Antwerp
16	"	.. "	480	"
16	"	.. "	230	Hamburg
	HULL—			
14	Wilsons and N.E. Railway Shipping Co.	.. "	4,320	Antwerp
14	"	.. "	800	Hamburg
16	"	.. "	12,920	Antwerp
16	Helmsing and Son	.. "	7,200	Riga
17	Anglo-American Oil Co.	.. "	16,590	New York
17	W. Gillyott and Co.	.. "	7,200	"
17	"	.. "	46,840	"
17	Thos. Wilson, Sons and Co.	.. "	3,200	S.Petersburg
	MANCHESTER—			
16	Homelight Oil Co. (Aureole)	Lamp	1,452,600	Batoum
16	W. Hodgson and Co.	.. Lub.	10,470	Riga
16	Geo. B. Taylor	.. "	55,400	New York
17	"	.. "	1,200	"
17	Worthington and Boler	.. "	1,000	Philadel.
18	Manchester Liners	.. "	8,360	"
	NEWCASTLE—			
16	Tyne-Tees S.S. Co.	.. "	360	Hamburg
18	W. Swanston and Sons	.. Lamp	440	Amsterdam
20	P. H. Matthiessen and Co.	Lub.	140	Bergen
	GLASGOW—			
16	J. and A. Allan	.. "	10,980	Philadel.
16	Anchor Line	.. "	57,400	New York
16	"	.. M.Colza	4,000	"
	GRANGEMOUTH—			
16	J. Currie and Co.	.. L.Paste	340	Hamburg
16	"	.. Tar oil	400	"
	LEITH—			
20	J. Currie and Co.	.. Lub.	210	"
20	W. Graham Yool and Co.	Lamp	3,000	"
	Total for the Week	..	6,996,540	

FOR THE WEEK ENDED AUGUST 27TH, 1906—

Aug.	LONDON—			
21	Scott's Wharf	.. Lub.	2,500	New York
21	Fielder, Hickman and Co.	.. "	13,200	"
21	"	.. "	11,240	"
21	Schlieman's Oil Co.	.. "	240	S.Petersburg
21	Shell Transport Co.	.. Lamp	270	Pulo Samboe
22	Anglo-American Oil Co.	.. Lub.	26,000	New York
23	G. W. Sheldon and Co.	.. Lub. Gr.	430	Antwerp
24	London Oil Storage Co.	.. Lub.	1,500	Hamburg
24	T. H. Lee	.. L.Gr.	750	"
19	Consolidated Petroleum Co. (Balakani)	Gas	1,320,150	Philadel.
24	Shell Transport Co. (Pectan)	Fuel	1,012,700	Port Arthur
24	Bowring Pet. Co. (Lucifer)	Lamp	1,418,310	Philadel.
25	Lon. and Thames Haven Oil Co. (Tiflis)	.. Lub.	455,000	Batoum
27	Scott's Wharf	.. "	6,250	New York

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,



Midland Works;

BIRMINGHAM.

BUILDERS OF

OIL & OTHER
TANK WAGONS,And Every Description
of Rolling Stock

WITH WOOD OR STEEL

UNDERFRAMES.

Anglo-American Oil Co., Ltd.,

SOLE IMPORTERS

Finest American Lamp Oils

WHITE ROSE



. and .



ROYAL DAYLIGHT.

Pratt's Motor Spirit

PACKED IN SEALED TWO GALLON CANS.

Universally used by all leading Motor
Manufacturers, Motorists, Railway and
Motor Bus Companies.



IN USE AND FOR SALE EVERYWHERE.

== QUALITY TELLS. ==

To Dealers only.

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.	DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.					Aug.				
27	G. W. Sheldon and Co.	L.Gr.	3,060	New York	25	Hull & Netherlands S.S. Co.	Tar Oil	2,400	Rotterdam
27	J. Spurling	"	340	"	25	"	"	3,000	"
27	United Asbestos Co.	Lub.	1,550	S. Petersburg	25	Thos. Wilson, Sons and Co.	Lub.	38,400	New York
27	J. Harrison	"	300	Treport	25	Wilsons and N.E.R. S. Co.	"	1,240	Antwerp
LIVERPOOL—					MANCHESTER—				
21	Liverpool Storage Co.	"	4,800	New York	31	H. Wells	"	2,400	Philadel.
21	"	"	2,400	"	21	Worthington and Boler	"	820	"
21	Vacuum Oil Co.	"	8,400	"	21	Meade-King, Robinson & Co.	"	39,000	"
21	Anglo-Am. Oil Co. (Genesee)	Gas	406,000	Philadel.	21	"	M. Colza	4,800	"
21	C. C. Wakefield	L.Gr.	1,500	Antwerp	21	Crew, Levick and Co.	Lub.	22,640	"
23	Liverpool Warehousing Co.	Lub.	880	Hamburg	21	G. B. Taylor	"	41,000	"
23	J. Light and Son	"	1,000	New York	22	C. H. Morton and Son	"	400	"
24	Huxley and Co.	Crude	1,200	Hamburg	23	E. Brooke	"	3,200	"
25	Vacuum Oil Co.	Lub.	12,000	New York	23	Anglo-Amer. Oil Co. (Genesee)	Gas	532,000	"
27	Colby and Co.	"	2,000	"	24	" (Delaware)	Lamp	400,000	"
27	Liverpool Storage Co.	"	10,000	"	24	Consolid. Pet. Co. (Suram)	"	924,800	Batoum
27	Meade-King, Robinson & Co.	"	10,000	"	24	General Petroleum Co. (Pinna)	"	440,000	Kustendje
27	Valvoline Oil Co.	"	2,050	"	24	D. Currie and Co.	Lub.	1,200	Hamburg
27	E. H. Kellogg and Co.	"	2,000	"	27	Hodgson & Co.	"	530	New York
24	Crew, Levick and Co.	"	970	Lisbon	27	Liverpool Storage Co.	"	7,570	"
BARROW—					27	Bramwell Fern and Co.	"	2,460	"
25	Asiatic Petroleum Co. (Cardium)	Spirit	1,003,350	Pulo Samboe and Balek Pappan	NEWCASTLE—				
BRISTOL—					21	Tyne-Tees S.S. Co.	"	9,720	Antwerp
23	First Anglo-Russian Oil Co.	Lub.	1,050	New York	SOUTH SHIELDS—				
23	W. Smith and Co.	"	15,400	"	22	Consolidated Pet. Co. (Rion)	Lamp	815,100	Hamburg
23	Anglo-American Oil Co. (Lackawanna)	Lamp	664,290	Philadel.	22	Anglo-American Oil Co. (Bayonne)	"	500,050	New York
23	"	Gas	532,550	"	GLASGOW—				
23	"	M. Colza	81,650	"	21	Anchor Line	Lub.	1,410	"
GRIMSBY—					LEITH—				
25	J. Sutcliffe and Sons	Lub.	240	Hamburg	21	Henderson and McIntosh	"	14,050	Philadel.
HULL—					21	J. Cormack and Co.	"	4,000	Riga
21	Wilsons and N.E. Railway Shipping Co.	Lub.	400	"	LIMERICK—				
23	Anglo-American Oil Co. (Bayonne)	Lamp	500,050	New York	22	Consolidated Petroleum Co.	Lamp	480,000	Batoum
23	"	Lub.	147,400	"	Total for Week				
					Total for the past Fortnight ..				

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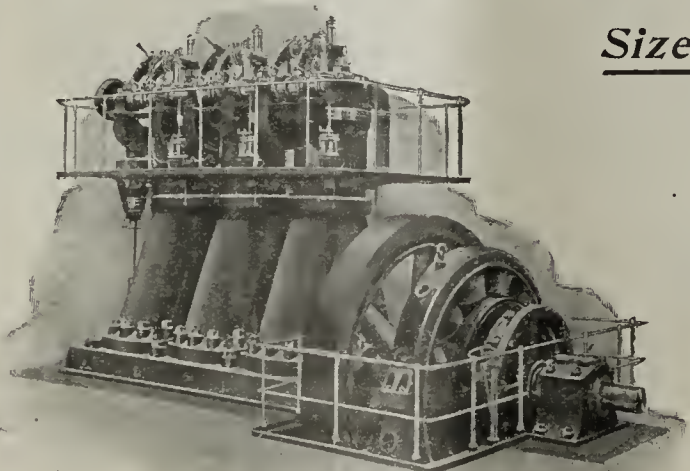
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

SEPTEMBER 15TH, 1906.

No. 381.

Editorial Notes.

The Burmah Oil Company Agitation. The Burmah Oil Co., like other oil enterprises of late, has been passing through a period when the shareholders have been divided in opinion upon a most important subject. As our readers are aware, the managing agents of the company in India have been receiving a remuneration for their services, which, to put it mildly, has been of a very princely nature, amounting as it has done to between £30,000 and £40,000 per annum. But a scheme has been devised, and now agreed to by the majority of the shareholders, by which the aforesaid remuneration is considerably reduced; in fact, the saving is equal to one per cent. on the ordinary capital of the company. This in itself has without a doubt been a step in the right direction. But many of the shareholders have contended, and certainly there has been a deal that could be said in support of their arguments, that the modified remuneration was still too large and totally out of proportion to the work accomplished, and, in years of bad trade would constitute a very heavy charge against the company. Their suggestion was that instead of the now fixed salary of £15,000 per annum, and 2½ per cent. upon the gross profits, the first figures should be reduced to £5,000, which sum they believed was quite fair and equitable. Mr. Fred. A. Macquisten championed the cause of the shareholders who fought for the £5,000, which, if brought about, would have meant a permanent increase of one per cent. dividend on the ordinary shares. Yet they were in the minority, and the suggestions of the directors were agreed to, the only consolation for Mr. Macquisten and his friends being that 'tis better to have fought and lost, than never to have fought at all.

The Standard Oil Company Asks for Fair Play. The warning which has been sent broadcast by Mr. F. D. Asche, of the export department of the Standard Oil Co., possesses a peculiar significance. It is published upon another page of this issue of the REVIEW, and sets forth the Standard's claim to fair play as clearly as it could well do. In the last issue of our journal, while commenting upon the decrease of the American petroleum trade, we emphasised the point which impressed itself upon our mind that the continual agitation against the Standard Oil Co. was having a very depressing effect upon the export petroleum trade of that country, and though we had no knowledge of it at that time, the important warning from Mr. Asche was then being published in America. The American press, we know, has taken a prominent part in this unfair agitation against all that is connected with the Standard Oil Co. In England, too, as well as on the Continent, the same feeling has been engendered by the general press, and

the effect of the prejudice now raised against American petroleum, is already beginning to make itself felt. Should this decrease in the petroleum export trade of America continue, then most assuredly the American producer is face to face with a most serious crisis. The export trade in petroleum has always been the mainstay of the American producer, and should that be imperilled then the outlook will be very dark indeed. It is, of course, easy for the foreign press to cling to misconceptions regarding an industry of which it knows little, but no excuse can be given to the transatlantic journals when, for the love of sensationalism, like their President courts cheap popularity, they do all in their power to pull down a most important branch of the country's commerce, and deprive private enterprise of its just reward.

In Far Away New Zealand. From the Antipodes comes news that the search for petroleum has begun in earnest, and now, after efforts extending back as far as 1865, oil has been developed in what is said to be paying quantities in New Plymouth on the west coast of New Zealand. After the first operations, now nearly forty years ago, there was a general suspension for some years, at the end of which time efforts were put forward with more energy. But the outcome was little on the side of success, and all work was discontinued for many years. Recently, however, operations have been resumed, and it is announced that all difficulties have been overcome, and an excellent oil, free from water, has been obtained from one of the wells. Report has it that the flow from this bore hole is now 400 barrels per day, while an enormous pressure of gas suggests considerable force in the lower strata. An operating company is now scouring the 5,000 acres of land upon which it has secured rights, preparatory to sinking a number of wells, building a refinery, and going thoroughly into the business of oil production and refining. Thus with one bound New Zealand becomes a very interesting place to those interested in the colonial production of petroleum.

Pushing Forward the Claims of Liquid Fuel. Dr. Deane, the worthy Secretary of the Californian Petroleum Miners' Association, has recently addressed an interesting letter to President Roosevelt upon the question of liquid fuel, and its many advantages as a fuel for warships. The writer points out that though the United States Navy Department made extensive liquid fuel tests two years ago, and its conclusions were accepted by other countries, it still lags behind. Dr. Deane then puts forward eleven reasons why liquid fuel should be used by the United States Navy, commenting upon the fact that the Navy's efficiency at the present time is reduced 50 per cent. in comparison with some of the foreign navies which have already begun to use oil as fuel. "If the English Admiralty," says Dr. Deane, "can afford to make this change from coal to oil with no

oil production at home, the United States Navy Department certainly can with a large oil territory on both the Atlantic and Pacific coasts." There is a large amount of reason in this open letter to President Roosevelt, but at the present time the Presidential mind appears to be concentrating its attention round the working of trusts to such an extent that it is out of all question to expect any attention to be paid to such matters as those referred to by Dr. Deane. President Roosevelt seems bent upon killing the petroleum industry, and that being so, we should imagine he would be the last man in the world to go in for running the States navy on liquid fuel.

The Organisation of the Galician Petroleum Industry. The question of the organisation of Galician petroleum is still unsettled. It will be remembered that recently a provisional agreement was arrived at between the producers and the Petrolea Co., the final coming into force of which was made conditional upon the adhesion of producers representing at least 95 per cent. of the Galician crude oil output, and upon the transport companies undertaking not to handle outsiders' oil. Up to the present this agreement has been only accepted by a few firms, whilst the majority of the producers are either selling their oil to outside buyers for prompt delivery or storing it. The position has now been further complicated by a scheme proposed to the producers by the Vacuum Oil Co., the main conditions of which are given elsewhere. Development in this respect will have a particular interest, but one satisfactory feature of the situation is the apparent resolve of the producers to act in a body.

INCREASED PUBLIC STORAGE FACILITIES ON THE THAMES.

With the more extended use of petroleum and its lighter products in this country, a most opportune announcement is made, as will be seen from an advertisement in another part of this issue, that considerable increased storage facilities are now at liberty on the Thames for the use of oil importers.

As is well known, when the Roumanian Oil Trust passed into Continental hands, the exceptionally well situated petroleum storages which they have established at Thames Haven became vacant, but were eventually leased from the European Petroleum Co. by the General Petroleum Co., and from that time until quite recently the large quantities of petroleum and benzine handed by that concern have found very suitable storage accommodation at Thames haven. Now that the General

Petroleum Co., however, has taken over the Pure Oil Co.'s installations at Purfleet, the extensive tankage accommodation at Thames Haven, owned by the European Company, is again at liberty, and offers splendid facilities to importers desiring the storing of oil in bulk, etc. In all, no less than 18,000 tons of petroleum products can be stored at this installation, which, it may be added, adjoins that of the London and Thames Haven Oil Wharves. One distinct advantage which the European Co.'s installation offers to importers is that by reason of the refinery built on the same site, and which is at liberty, they have facilities at their disposal to re-distil any cargo of petroleum products which may from various causes have become damaged.

THE END OF THE BAKU STRIKES.
GENERAL RESUMPTION OF WORK.

We are pleased to be able to state that the unfortunate workers' strike at the various properties throughout the Baku oil fields has, at last, come to an end, and according to latest dispatches, if work has not already been resumed upon some of the plots it is only a question of a day or two. In the case of the whole of the Anglo-Russian oil companies, work has been resumed, the workers at the Schibaieff and the Russian Petroleum and Liquid Fuel Companies properties, returning in the early part of the present week, while some of the Schibaieff employes started toward the end of last week. Up to the present there is little information of an absolutely definite character to hand as to how far the demands of the men have been acceded by the producers, but the general belief is that the workers have returned in the majority of cases under their former conditions. Everything is quiet at Baku, and it is to be hoped that the conflict between men and masters is now altogether a thing of the past.

ACTIVITY IN THE NEW CANADIAN PETROLEUM FIELD.

A dispatch from Toronto to the *Oil, Paint and Drug Reporter* states that the activity of American operators for oil in the Canadian fields is now centred in the vicinity of Chatham city, which is contiguous to the Petrolea district. This particular region is Tilbury and Raleigh townships. The land for miles has been leased; there are forty wells now in operation, and many more are being put down with not one dry hole so far. The cost of boring and casing the wells works out at about \$2,500 each. There is a new pipe line from the wells to the railway line, and the oil flows from the tanks that receive it to the cars of the Imperial Oil Co., and is then conveyed to the refinery at Sarnia. The operators realise \$1.92 per barrel for the product, which includes the Government bounty, hence a handsome profit is made.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO SEPTEMBER 10th, 1906.
IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.	Since Aug. 13.	From Jan. 1.
Austria ...	—	876,640	—	366,890	6,000	77,930	—	—	—	—	—	—	—	—	6,000	1,332,460
Belgium ...	—	370	22,650	355,190	—	11,000	—	—	—	5,300	—	—	—	2,886	22,650	363,746
Borneo ...	—	480	—	—	—	—	—	—	7,6510	7,540,910	—	1,010	—	—	716,510	7,542,400
Canada ...	—	—	—	12,800	—	32,400	—	—	—	—	—	—	—	—	—	45,200
Germany ...	1,333,640	5,084,070	36,035	984,445	—	—	—	—	—	2,380	—	—	—	7,890	1,369,675	6,089,265
Holland ...	—	10,180	—	2,879	—	—	—	—	28,000	1,318,720	—	271,600	2,280	58,720	30,280	1,661,070
Roumania ...	489,600	4,449,755	—	—	—	—	1,052,000	2,087,880	—	1,024,580	—	—	—	—	1,511,600	7,562,215
Russia ...	924,800	25,809,870	915,140	3,932,640	—	—	362,500	1,966,750	—	5,050	—	—	—	5,660	2,202,740	31,719,970
Sumatra, &c	—	—	—	—	—	—	—	—	—	970,500	—	—	—	—	—	970,500
U.S.A. ...	2,234,723	65,844,580	1,089,000	28,615,004	4,740	538,293	—	33,699,560	—	6,844,200	—	9,072,430	30,210	1,199,220	3,588,673	145,803,197
Other Countries	—	1,370	—	29,010	—	—	—	—	—	730	—	—	—	213,730	—	244,840
	4,982,703	102,077,315	2,063,125	34,298,849	10,740	659,623	1,414,500	37,754,190	744,510	17,718,430	—	9,344,410	32,490	1,488,106	9,248,128	203,349,863

Boring Operations in the German Oil Fields.

ACTIVITY AROUND WIETZE.

There has lately been an increased activity in boring operations at the Wietze oil field in Germany. Two derricks have recently been erected by the International Boring Co. on Devils Island, one on the property of the Hannoversch-Westfallische Erdoelwerke Co., and the other on a plot belonging to the Maatschappij tot Exploitatie von Oliebronnen. The Celle-Wietze has quite recently struck oil in two new boreholes drilled on the river Aller, near the junction with the Wietze, and as the indications on the plot are very promising, the company has resolved to there establish a central electric station for the supply of power and light.

The Alixe Co. has also found oil in a borehole on

The total quantity of crude oil sold in the first half of this year amounted to 35,988 tons. This increased sale is the result of the improvement in the prices, which the refineries are now paying for the crude, and is also due to the large stocks which certain producing firms had accumulated during the period of low prices. That a slackening in production has taken place is also shewn by the reduced number of workmen employed, which now amounts to 890.

Nevertheless, in interested circles, there is the confident expectation of a rapid development of the Hanover petroleum industry in the near future. This hope has been much strengthened by the concentration movement



A CLUSTER OF DERRICKS IN THE FIELD.

their leasehold plot, while the Erdoelwerke Hermansglück have been similarly successful on a well placed behind the Germania plot. Two wells of the same company are now in course of drilling.

The Nederlandische-Deutsche Petroleum Co. has been successful with a well on the Tramberg, but on the other hand the same company's wells at the Schaf Bridge have had to be abandoned.

The number of firms operating in the Wietze oil field in the second quarter of 1906 was thirty-three, which is an increase of six against the first quarter of the year. It is, however, less than in the corresponding period of last year. This decrease is rather strange in view of the present favourable conditions prevailing in the Wietze oil industry. For the last year or so the petroleum industry in Hanover has remained stationary. There is even a slight decline to record, if we look at the actual figures of production. In the first half of this year the output of crude oil, according to official statistics, amounted to only 29,540 tons against 31,649 tons in the corresponding half of 1905, being a decline this year of 2,109 tons. On the other hand, the quantity of crude oil sold shews an increase against the first half of last year by 10,921 tons.

now in progress among the firms interested in the Wietze oil field.

An important step in the concentration movement is the formation of a new company under the title of Deutsche Mineraloelindustrie Gesellschaft, in Cologne, with a capital of 16,000,000 marks, which is intended to take over and work the most important oil properties in Wietze. The founders are the Aschaffenhauseische Bank, the International Boring Co., and the Deutsche Petroleum Gesellschaft, controlled by the Deutsche Bank. Practically the whole German petroleum producing industry is now controlled by big German banks, namely, the Deutsche Bank, the Dresdner Bank and Aschaffenhauseische Bank, the National Bank fuer Deutschland, the Bergisch-Märkische Bank and the Essener Kreditanstalt. Some of these interests are already grouped together, and negotiations are now in progress with the object of combining all of them in one concern.

The Wietze oil field proper being now fully taken up, drilling for oil is spreading to the adjoining localities. Special interest is attached to the operations in progress at Wietzenbruch near Celle, where the town of

Celle also owns some land. Although borings have been carried here to a considerable depth, no appreciable results have so far been achieved.

At Steinförde, which is situated to the south-east of Wietze, explorations of petroleum are extending over a constantly increasing area. Quite recently a large tract of land was taken up for the purpose by the Hansa Co. A considerable number of derricks can now be seen in the Steinförde district.

Boring for petroleum is also proceeding in the county of Bentheim. One new derrick was recently erected at Suddendorf near Schüttorf, whilst another is about to be erected at Westenberg near Bentheim. The firm undertaking these operations are Messrs. Max Ulrich and Co., of Berlin. In one of the wells in the locality considerable eruptions have occurred. The borings in the Bentheim Forest have so far led to no results, but are being continued.

LATEST FROM THE GALICIAN OIL FIELDS.

Owing to difficulties of credit, boring operations are proceeding slowly at Tustanowice. The Galicia Co. has suspended work on their well on Plot III. on the River Ponerlanka, while there are rumours in circulation that some of the smaller firms are about to cease operations altogether. The months of September and October are the most difficult for the financially weak firms, who have no oil and have to work on credit. The output of crude oil at Tustanowice in August is estimated at about 3,000 tons less than in July, the largest producing wells having diminished their yield to a considerable extent. Several new wells became productive during August, including the Parnes and Popielanka wells of Mikucki, but these proved insufficient to compensate for the decline in the output of the old wells.

Among the new wells started may be mentioned one of Messrs. Fanto and Co. on the Terlecki plot near the Aba property, well No. 2 of Messrs. Dlugosz and Laszcz near the Sesam and Sas plots, and also a well by Messrs. A. Fauck and Co., near the Roman and Tenny plots.

The second oil stratum, which was struck in well No. 1 on the Litwa plot promises to be very prolific. This well at first produced 50 tons, subsequently rose to 55 tons, and kept steadily at this at the time of writing. Well No. 2 on the same plot produces from the first oil stratum a steady 40 tons per day, and up to the present has produced altogether 40,000 tons of oil. Well No. 3, which is now in course of drilling, began to shew promising oil traces at a depth of 560 metres. At Poraz, Messrs. Styber and Zeitleben came across some definite oil traces in their first borehole at a depth of 604 metres.

At Libusza Count Skrzynski began drilling on his property, and at a depth of 250 metres obtained a yield of five tons per day. As a result of the success another well has now been commenced.

At Holowiecko, in the Stary Zambor district, trial borings for petroleum have been started by the Gluckauf Galizien Co., a Berlin concern. This company intends to sink three boreholes to a depth of 1,000 metres. The geologists who have investigated the oil deposits there are predicting very favourable results.

The formation of a new company for operations in the Galician oil fields is to be recorded under the title of Wolski, Korsak, Weydlich and Co. This is the first petroleum company formed under the new Austrian Companies Act. The capital is 1,200,000 kronen, which has been fully paid up. The company has taken over the Taran property which belonged to Messrs. Wolski and Co., who take up 50 per cent. of the shares in the company.

THE POSITION OF THE SCOTCH OIL COMPANIES.

The position of the Scotch oil companies is dealt with at length by Mr. Benjamin Taylor, in the *Financial Review of Reviews* recently published. Summarising the position of the year just closed, the author finds that in the four large operating companies the progress made during that year was not so great as that recorded during the preceding twelve months, although they were very satisfactory. The results of the companies for the past three years are then given, and these we herewith reproduce:—

BROXBURN.

	1905-6.	1904-5.	1903-4.
	£	£	£
Brought forward	3,121	3,303	2,626
Profit for Year	73,049	69,615	62,068
Depreciation	12,676	12,035	11,630
Preference Dividend	6,000	6,000	6,000
Ordinary Dividend	29,962	29,962	29,962
Income Tax on Dividend	1,498	1,798	1,798
Retort Renewal	23,000	20,000	12,000
Carried forward	3,033	3,121	3,303

(Dividend on Ordinary Shares—15 per cent. for each year.)

OAKBANK.

	1905-6.	1904-5.	1903-4.
	£	£	£
Brought forward	4,663	3,923	3,912
Profit for year	48,728	48,668	42,978
Interest on Loans	2,077	2,415	2,189
Ordinary Dividend	26,512	26,512	21,771
Plant Depreciation	12,002	12,000	10,000
Retort Renewal	5,000	5,000	5,000
Reduction of Price of Dudingston Shale Field	2,000	2,000	1,500
Writing off Boring Lands of Humble, etc.	739	—	—
Writing off Cost of Transfer of Lease, Boring, etc.	—	—	1,254
Writing off Cost of Registration Tax, Advertising Prospectus, etc.	—	—	1,252
Carried forward	5,062	4,663	3,923

(Dividend on Ordinary Shares—15 per cent. for 1905-6 and 1904-5, and 12½ per cent. for 1903-4.)

PUMPHERSTON.

	1905-6.	1904-5.	1903-4.
	£	£	£
Brought forward	3,905	3,781	2,273
Profit for year	91,514	91,934	85,109
Interest—Debentures and Loans	657	2,456	3,985
Depreciation	10,000	10,000	10,000
Expended on Improved Plant, etc.	23,556	17,204	15,465
To Reserve Fund	20,000	23,000	15,000
Preference Dividend	6,000	6,000	6,000
Ordinary Dividend	33,150	33,150	33,150
Carried forward	5,056	3,905	3,781

(Dividend on Ordinary Shares—30 per cent. for each year.)

YOUNG'S.

	1905-6.	1904-5.	1903-4.
	£	£	£
Brought forward	5,212	3,788	2,393
To Maintenance and Renewals.	—	—	29,973
Profit for year	98,200	97,325	91,127
General Depreciation	20,000	20,000	20,000
Retort, etc., Fund	20,000	20,000	16,000
Fire Insurance Fund	5,285	3,000	—
Balance Outlay for Refrigerating and Sweating Plant	—	—	6,977
Interest—Debentures and Loans	16,732	15,732	18,113
Ordinary Dividend	27,168	27,168	22,640
"B" Debentures—Contingent Dividend	9,000	9,000	6,000
Carried forward	5,226	5,212	3,788

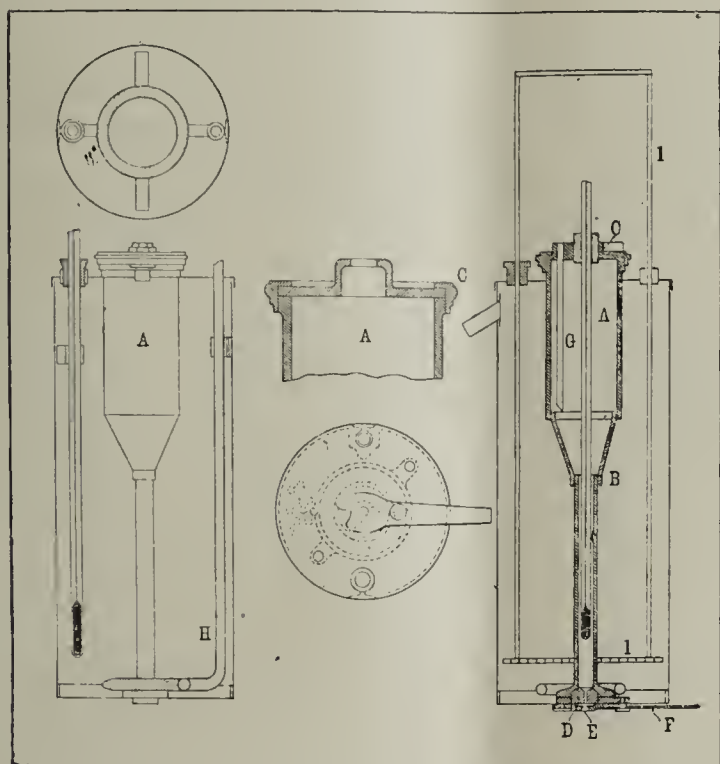
(Dividend on Ordinary Shares—6 per cent. for 1905-6 and 1904-5, and 5 per cent. for 1903-4; "B" Debentures, including contingent right, 1905-6 and 1904-5, 12 per cent., and 1903-4, 10 per cent.)

INVESTIGATION OF PETROLEUM AND ITS PRODUCTS.

By **M. A. RAKUSIN.**

Published at Braunschweig (1906) by Messrs. Frederick Vieweg and Son.

A publication under the above title has recently been issued which will undoubtedly be welcomed by everyone who is connected with the analyses of petroleum products as a most useful handbook. The name of M. A. Rakusin has been prominently brought before the scientific world



by the various investigations which he has conducted at the University of Moscow, many of which investigations have already been published in the REVIEW. The present publication, however, in addition to the general methods of analyses, includes the result of the work of the commission appointed in Baku and St. Petersburg to introduce standard methods for the testing of petroleum products. Three quite new chapters have been included in this respect, these being the estimation of the calorific value of petroleum; the optical investigations of petroleum and its products, and the quantitative estimation of petroleum products in reservoirs.

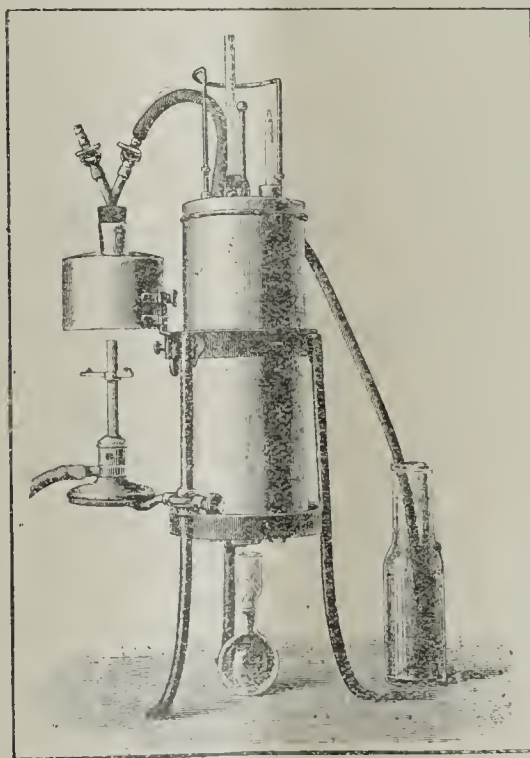
Some of the methods mentioned by the author have, for the time being, more of a theoretical than a practical interest, and specially is this the case with the method of separating fractions in the cold by means of various solvents. To this subject we referred some time ago when we detailed the results of Mr. Kharitchkoff, one of the most well-known authorities in this direction. Although the methods referred to are very ingeniously applied in order to define the character of the various oils in the Caucasus, there is, for the time being, no data whatever for the application of the same methods to other classes of oils, and this remark also applies to the optical investigations of petroleum oils, which have been most carefully gone into by Mr. Rakusin. In fact, the book of Mr. Rakusin does not merely restrict itself to a compilation of analytical methods as applied to petroleum, but, as may be gathered from its title, it

covers a much wider subject by dealing with the various investigations from a purely scientific view, and giving results which at the present at all events are for the most part theoretical.

From this point of view alone, apart from the practical matters which the author lays down very clearly in his work, Mr. Rakusin's latest publication of researches will be of the greatest possible value to anyone who is interested in the scientific research in connection with petroleum hydrocarbons.

Some practical methods, however, are given, which have been adopted in Russia, though not so much known to the average technical man of Europe, and one of these is a method of testing the viscosity of oils by a viscometer invented by Lamansky and improved by Nobel. This apparatus has a considerable advantage over the usual apparatus used—that of Engler or Redwood. In the first place, the pressure under which the oil flows out during the whole time of the experiments is a constant one, which is not the case with either of the other two methods, and, secondly, the maintenance of an even temperature in both the inner and outer vessels is considerably easier than in the case of either of the other two methods.

The illustrations which we herewith give of Lamansky's viscometer will be so readily understood that it is almost unnecessary to further comment upon them. The



apparatus consists of two cylindrical parts as shewn in the sectional drawings, A being the oil container and B the water bath. The height of the vessel A is 300 mm., and its diameter 50 mm., in the upper part, and 12 mm. in the lower part. The height of the vessel B is 285 mm., and the diameter 115 mm. The top part of the vessel A is hermetically closed by the cover C, the lower part being closed by the cork D, excepting for the small opening E, which is in turn covered by a metallic disc. In the cover C the copper tube G is inserted, and this is

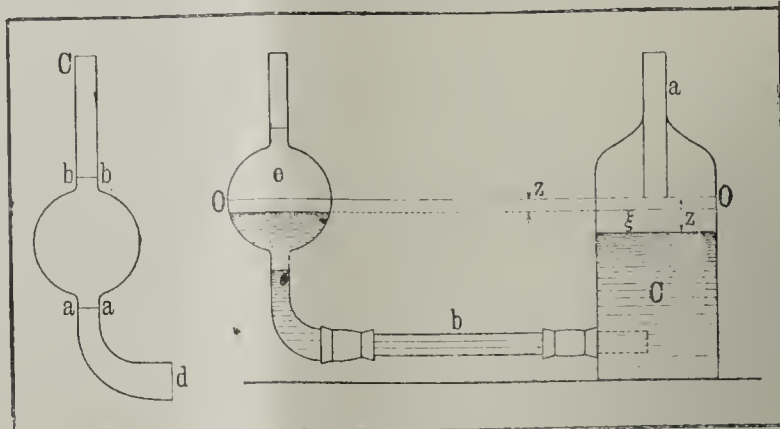
5 mm. diameter, and of a length which enables the lower part to be exactly within 200 mm. above the opening E. In the water vessel B there is a steam pipe marked H, which enters a perforated coil lying at the bottom. In the water vessel also there is an agitator marked I, which consists of a movable ring in the form of a sieve having an upward and downward movement. In the covers of the vessels A and B thermometers are inserted, as may be seen by a glance at the drawing which appears on the preceding page.

The size of the opening E in the cork D is generally so arranged that 100 cc. of distilled water at a temperature of 50° C., with a constant pressure of 200 mm., flow out in 60 seconds. This flow is so regulated that in any case it should not be less than 59 seconds nor more than 61 seconds. The thickness of the cork D in the opening E is generally about 10 mm. The oil is poured in A until it reaches the same level as the water in vessel B, and then the cover is hermetically closed. So long as the lower end of the copper pipe G is in the oil, the flow of the liquid from the vessel A will be under the constant pressure of 200 mm.

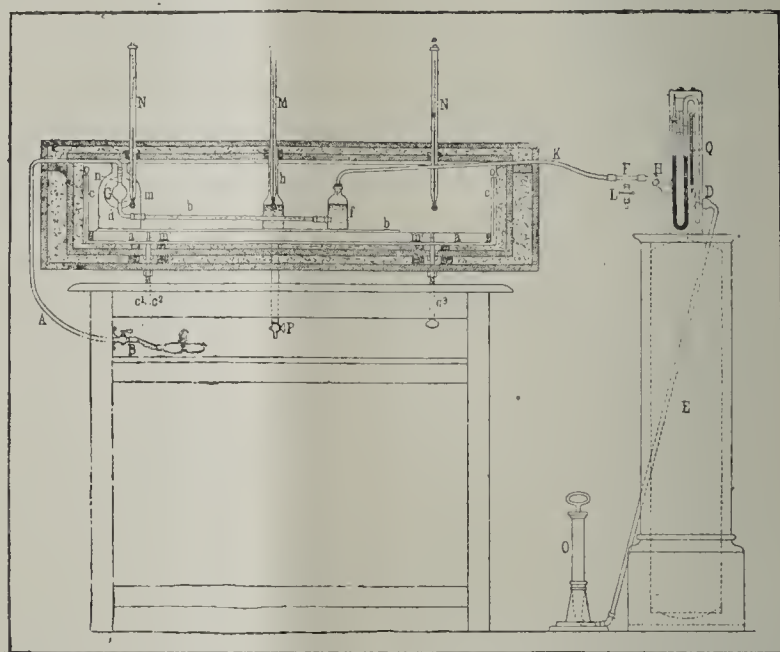
Another apparatus which is fully described in Mr. Rakusin's book is that which is in use in the Government offices in Russia for the purpose of determining the inner friction of lubricating oils. As is known, in every case when the temperature is lowered, the inner friction of lubricants are considerably increased, but this increase in fatty oils is not so rapid as in the case of oils from the Baku district, while also the increase of the inner friction of Baku mineral oils is not so great as is the case with the American oils. To determine that friction, Professor Petroff has invented an apparatus which we illustrate herewith. The oil to be determined is poured into vessel C, shewn on the first sectional drawing, through the pipe, and the oil is under constant pressure forced through the pipe B into bulb vessel E.

The second figure illustrates the whole apparatus

showing the compressor pump and its connections with the vessel in which the oil is contained, and which is,



under a fixed pressure which is indicated by a mercurial monometer, forced into the receptacle G. The amount of pressure and the time required to force the oil at a certain temperature from vessel F to a certain point in the vessel G defines the inner friction of the lubricating oil.



For the exact formula and calculations, and the reason for the same, as well as how to use the apparatus, we must refer our readers to the work itself.

Mr. Rakusin's handbook contains a mine of very valuable information, and will, we doubt not, find a place in the laboratory of everyone interested in petroleum investigations.

THE PETROLEUM TRADE OF NOVOROSSISK IN THE FIRST HALF OF 1906.

The arrivals of various petroleum products at Novorossisk from Baku and Grozny during the first half of 1906, compared to the corresponding half of 1905, were as under:—

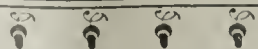
Products.	From Baku.		From Grozny.		Total.	
	Six Months, 1906.	Six Months, 1905.	Six Months, 1906.	Six Months, 1905.	Six Months, 1906.	Six Months, 1905.
Light Kerosene	1,170,660	6,079,205	926,374	393,528	2,097,034	6,472,733
Solar Oil	—	117,769	—	—	—	117,769
Crude Oil	97,547	—	862,324	2,009,375	959,871	2,009,375
Residuals	301,187	847,729	155,997	—	457,184	847,729
Benzine	—	—	21,591	145,792	21,591	145,792
Ligroin	—	—	155,043	365,804	155,043	365,804
Total	1,569,394	7,044,703	2,121,329	2,914,499	3,690,723	9,959,202

The shipments of petroleum products from Novorossisk during the first half of 1906, compared to the first half of 1905, were as follows:—

	Abroad.		To Russian Ports.		Total.	
	Six Months, 1906.	Six Months, 1905.	Six Months, 1906.	Six Months, 1905.	Six Months, 1906.	Six Months, 1905.
Kerosene	1,639,646	6,994,446	261,919	344,357	1,955,565	7,338,803
Kerosene Distillate	—	375,860	—	—	—	375,860
Solar Oil	145,510	374,479	—	—	145,510	374,479
Crude Oil	—	—	—	1,668	—	1,668
Residuals	398,654	788,445	819,672	65,169	1,218,326	853,614
Benzine	—	162,430	868	151	868	162,581
Ligroin	162,376	195,190	—	—	162,376	195,190
Benzine Distillate	—	—	—	340	—	340
Goudron	—	—	1,170	1,214	1,170	1,214
Total	2,400,186	8,890,850	1,083,629	412,899	3,483,815	9,303,749

OCCURRENCES OF PETROLEUM IN MESOPOTAMIA.

By PROF. H. HOFFER.



The deposits of petroleum in Mesopotamia and Persia are of particular geological and technical interest, inasmuch as the oil belts there are of quite extraordinary length. There can be no doubt that within this zone, which is more than 1,000 kilometres long, there are very prolific oil deposits, which need not necessarily be situated at the spot where there are natural oil springs. It is for the geologists to find out those places which offer the greatest probability of prolific oil strikes, and the following particulars are intended to guide them in their searches.

The existence of petroleum in Mesopotamia and Persia was known even to Herodotus; asphalt deposits in Babylon are mentioned in the most ancient written monuments which we possess, and the mode of the extraction of the petroleum remains now as it was in the times of Herodotus. All attempts hitherto made to create a petroleum industry there on modern lines have failed, partly through inadequate capital and partly owing to climatic, political, social, and transport conditions.

It is hoped that the Bagdad Railway will soon open up the oil fields in Mesopotamia. Capital will follow the new iron road. In Persia, the capital of various nations has lately been attempting to overcome the obstacles which have until now prevented the development of the oil fields there.

The northern petroleum occurrences are situated at Hammam-Ali, on the Tigris, about 32 kilometres from Mosul, on the right bank of the Tigris, at a distance of 800 metres from that river. There we find hot salty sulphur springs, which are used extensively by the sick from Mosul, and from the surface of waters of these springs petroleum is collected. Near the springs there are shafts, in which petroleum trickles out in streaks. The layers of light limestone are here almost horizontal.

In Kiara, which is situated 67 kilometres south of Mosul on the Tigris, petroleum pits are known to exist; while at Al-Hadhr, called by the ancients Hatræ, 80 kilometres south to south-west of Mosul, oil is produced from pits.

At Defilé El-Fatha, where the Tigris breaks through the Djebel Hamrin, there are considerable outcrops of petroleum and natural tar. Along the left bank of the pass there stands a 3-4 metres thick horizontal bank of white limestone with several layers of conglomerates embedded in it, from which bitumen oozes, along a length of about 5 kilometres.

On the right bank of Tigris, about 11 kilometres above El-Fatha, there are large sulphur springs. Mr. F. Rottaunsell supposes the existence of extensive bitumen deposits on the south-eastern side of the Djebel Hamrin, and mentions the fact that at this spot the Tigris is navigable for light steamers and barges.

At Kerkuk, in the vicinity of this town, situated 150 kilometres south-east of Mosul and 200 kilometres north of Bagdad, on the upper course of the Adhem river, there are numerous petroleum wells placed in a

lower sandstone and conglomerate formation. These wells are of great importance for the trade of Kerkuk, which is on the caravan route between Bagdad and Mosul.

Mr. C. Ritter, in speaking of this petroleum field, says that near the various petroleum springs there are marshes full of sulphurous mud, and several hundred paces further east on the summit of a hill there is a flat circle-shape depression in the ground of about 50 feet in diameter, from which small flames are issuing without any smoke, but which give off a smell of sulphur. A hole made in this depression with a dagger produced a larger flame. The ground round this spot consists of unchanged limestone, whilst the ground round the oil springs consists of bituminous layers with alternating banks of limestone in which shells are embedded. In the upper strata there are also sandy marks. Both dark and light oils are produced here.

Kifri is situated 150 kilometres north-west of Bagdad, and 8 kilometres south of Kifri, on a low plateau composed of gypsum, there are also petroleum springs, which are not, however, exploited to such an extent as at Kerkuk. Gypsum is also produced here, and used as cement.

Tuz-Khurmati, in the north-western prolongation of the Djebel Oniki Imam plateau, about 3 kilometres from this place, at the foot of the Neft-Dag (petroleum mountain), 14 prolific oil wells exist. The town of Tuz-Khurmati is situated quite close to the gypsum and sulphur hills, which is in the same line as the similar hills at Kifri. In the vicinity of this place the river Aksa breaks through the mountains. In the narrow pass, about a quarter of an hour's journey from the town, there is an oil spring and a salt water spring, and a little further south there is another oil spring. The oil springs belong to the local inhabitants. The water is carried in conduits, in which the salt separates itself in the form of crystals, and is taken on as far as Kurdistan.

Another occurrence of petroleum in this district is mentioned by Mr. C. Ritter. At Ali-Dagh, a range of hills east of Tuz-Khurmati, there is a monument to Ali, and close by there are ruins of a castle. Facing these, on the other side of a river, there are pits from which petroleum is obtained.

A distance away from the last-named spot, in the mountains towards Kifri, there are five or six other oil wells, which are more prolific than the wells at Tuz-Khurmati, which are free from salt water, but on the other hand alum and sulphur abound in the vicinity.

Another petroleum field is to be found north of Kifri, or the second day's journey toward Suleimanch.

In the locality of Mendeli, which is near the Persian frontier, there were in 1902 in operation about 30 oil wells. The crude oil formerly used was carried in skins on camels to Bagdad, and there used for lighting purposes until it was displaced by the competition of American and Russian refined oil. The range of hills

between the open plain and on which Mendeli is situated, and the first limestone rock of the Pushti-Kuh consists of sandstone with conglomerates, very similar to the formation at El Fatha, which continues right up to the plain at Schuster and Disful in Persia, without any oil wells being known to exist there. South of Mendeli is the Djebel Atish (Fire Mountain).

Meissner appears to have visited another oil deposit in this locality. From Mendeli he went for three and a-half hours in a northerly direction over quaternary formations, coming to a range of hills running parallel with the Hamrin hills, and composed of conglomerate, gypsum and clay rock, which he considered of tertiary formation. After a further five and a-half hours wandering an oil occurrence was found on the river Naphot. From a black bank brown water, with a strong smell of sulphuretted hydrogen and sulphur ammonia, with drops of a brown natural tar, which floats on the water, is collected and carried in leather bottles to Mendeli, where it is submitted to distillation.

About half-a-ton of the tar is collected daily; the yield of illuminating oil is about 25 per cent., whilst about 12½ per cent. is lost in distilling. The hills near the oil springs consist of red and grey clays, and as the strata are laid bare profiles can be easily sketched. In addition to the main petroleum spring, traces of petroleum are also found in a bank of porous, hard, grey limestone, and in clay formation over layers of gypsum, but these are of no importance. On the naphtha hill, where there are oil springs, there are also emanations of natural gas. These gases, which vitiate the atmosphere over a large area, consist of a mixture of carbon and hydrogen. A distillation of the crude oil carried out by Meissner at Bagdad yielded the following fraction calculated in per cent. by volume:—

Boiling Point—250° C.			
Temperature.		% by volume.	
Up to 220° C.	10%
220 to 268° C.	20%
268 to 305° C.	30%
305 to 350° C.	35%

Hit, on the Euphrates, was known in ancient times for its richness in bitumen. According to E. Neumann, the oil wells in this district yield about 1,000,000 oka

(about 1,600 tons) of oil. The geological conditions are the same as at Mendeli and Tuz-Khurmati.

At the northern end of the Persian Gulf the existence of petroleum occurrences has been known for a long time, namely, at Basra, at a spot called Om-Geir (Bitumen Place), near the town of Koweyt in Benaïd el Or. Petroleum springs are also supposed by Constable to exist under the sea, since 17 kilometres north-east of the island of Farsi the sea was found by him covered with an oily substance smelling of petroleum. The same was also observed between the islands of Kubbar and Garu. An Arab pilot of Koweyt assured him that such occurrences are not unusual in the gulf.

On the island of Bahrein asphalt is found, which is equal in quality to Trinidad asphalt, and, according to laboratory tests made, it is suitable for paving purposes, as well as for isolating electric cables.

There is very little to be said about the history of the oil deposits in Mesopotamia. Although the existence of the deposits has been known from times immemorial, their exploitation is carried on in the same primitive manner as it was by the ancients, although the conditions there are highly promising for the creation of a petroleum industry on modern lines. About ten years ago the Turkish Government gave the oil field, situated 120 kilometres north of Bagdad, where there are about 30 oil wells, on lease to a private individual for a rental of 60,000 piastres per annum. In 1901 the Government began to produce the oil themselves, and during the summer they were getting 16 tons of oil per month, whilst in the winter the output fell to 13 tons per month, or an average output for the year of about half-a-ton per day. At Mendeli there is a small distilling apparatus of a capacity of about 130 kilogrammes, the only apparatus of its kind in the country. The oil is used chiefly as a curative remedy for horses and camels, and by the poorer class of inhabitants it is used as an illuminant.

It may be mentioned by the way that there is annually imported into Bagdad about 6,000 barrels of foreign petroleum of a value of £4,000 Turkish.

Last year the Bagdad Railway Co. commissioned experts to investigate the Mesopotamian oil regions.

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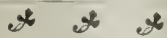
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MOTOR MATTERS.



At a recent meeting of the Bridlington Rural District Council, the Vicar of North Blurton said they wanted to restrain, curb, and improve off the face of the earth, the prowling, pestilential, petrol-propelled, pachydermatous, phlebotomising parchers. He was evidently referring to motor cars, but why didn't he say so?



With the object of awakening a much keener interest among fishing smack owners in the kerosene engine as an auxiliary power, the Yachting Club of France, on the initiative of that enthusiastic yachtsman the Duc Decazes, instituted a prize of 15,000 francs for a race of fishing boats fitted with internal combustion engines. The conditions were very simple. Each boat was to be supplied with 0.50 litre of petrol, or 0.56 litre of kerosene per horse-power per hour with which they had to cover the minimum distance of sixty nautical miles, and as the engine was regarded as an auxiliary, the competitor could use sails or engine or both, just as he wished. Ten boats entered, but on the eve of the race it was found that some of the boats, which were employed merely for conveying the fish from the fleet to the boat, were fitted with engines up to about 40 horse-power, and consequently the fishing smacks had no chance. It is hoped to draft proper rules before next year.



We learn from a reliable quarter that within the next few months the motor-bus service connecting up the Cape Town Docks with the tramway system will probably be in operation. This will remove one of several reproaches of long standing attaching to the question of convenience in communication between the city and docks. The vehicles which are to be ordered by the tramway company will be double deckers of one of the types which are doing good work in London and the provinces at the present time.



MR. Chief Justice Batley, of the High Court of India, is at present spending a well-earned holiday touring through the British Isles on a 12-h.p. Coventry Humber.



GENERAL interest is being directed to the necessity which exists for a practical dust preventative for our country roads. The present dry summer combined with the ever increasing traffic throughout the country, has made the dust fiend acute as it ever has been felt. In many parts of England the administrative authority surveyors have given the subject attention, and in one case at least, matters have to some extent been remedied. A long stretch of road at Richmond has been treated with "Hahnite," and now after weeks of hard wear, it has been found to have depreciated but little.

AMERICAN PATENTS GRANTED.

Device for Grappling Lost Tools in Drill Wells.—Edward S. W. Drought, Kansas City, Mo.

This is a device consisting of a socket-piece having secured thereto at its lower end, and encircling the same, a series of plate springs, each tapering in width being broader at the bottom than at the top, and of greater thickness at the top than at the bottom, and each being of curved or bell shape intermediate its ends.

Oil-Well Appliance.—Ralph E. Grant, Zelienopole, Pa.

In a spudding device, the combination with the crank arm of an engine and the drilling cable of an oil well rigging, of a hook-shaped member, a block swivelled upon one end of said member, and being connected with said crank arm, a grooved shoe detachably mounted in the opposite end of said member and engaging said drilling cable.

Oil or Hydrocarbon Burner.—Andrew M. Hunt and Thomas Mirk, San Francisco, Cal.

An oil burner provided with a discharge nozzle arranged at an angle to its body portion, said nozzle comprising an oil discharge tip, a thimble surrounding the tip, a diaphragm within the thimble and integral therewith, a shoulder on the tip onto which the diaphragm seats, means for uniting the thimble to an extension of the burner's body, transverse outlet openings in thimble for the escape of oil and steam, said openings being arranged above and below the diaphragm and radial outlets in the discharge tip for the oil.

Oil Tank.—John J. Tokheim, Cedar Rapids, Iowa.

The combination with an underground tank, of a pump embodying a head disposed substantially flush with the ground line, and constituting a storage box, and provided with a nipple, with a stuffing box, and with a filling and vent pipe, and a piston rod engaging the stuffing box.

RUSSIAN AND ROUMANIAN NOTES.

Thirty Tons Daily.—Well No. 4 of the International Co. at Bustenari has struck oil, and produces 30 tons daily.

A Good Yield.—Well No. 17 of the Campina-Moreni Co. at Moreni has struck oil. The daily yield varies between 150 and 200 tons.

Another Roumanian Spouter.—Well No. 6 of the Colombia Co. at Bustenari has struck oil. Well No. 2 of the same company continues to spout.

Roumanian Crude Oil Prices.—The price of crude oil in Roumania remains firm and stationary. The production is also stationary, and crude oil is much sought after.

The Baku Association.—The Council of the Baku Petroleum Association has decided to ask the Government for permission to open the next annual conference of the Association, the 23rd in number, on the 20th of November next (o.s.).

From Grosny.—Reports from Grosny shew that the labour movement there is subsiding. The troops have not yet been withdrawn from the oil field. From the 27th August the eight-hours' working day has been introduced in all branches of labour.

The Contract for the supply of 1,300,000 poods of liquid fuel to the Jaroslav Railway was divided equally between Nobel Bros. and the Eastern Transport Co. The price is 49½ copecs per pood ex barges, and 50½ copecs per pood ex storage at Jaroslav.

Tank Waggon Rent.—In July tank waggons of a capacity of 840 poods were rented at Saratoff for a year at 190 to 200 roubles each, whilst at the same time at Nijni-Novgorod and Moscow they could be obtained at a rental of 150 to 170 roubles per annum.

The Russian Benzole-Aniline Works Co., whose special business is the manufacture of aniline colours from petroleum residuals, has in 1905 incurred a loss on their operations of 16,433 roubles on a turnover of 21,210 roubles. The losses incurred in previous years amount to 66,205 roubles, making a total loss up to the end of 1905 of 89,638 roubles.

Drilling Near Lake Baikal.—Borings for petroleum have been commenced on the north-eastern side of Lake Baikal on the Sviatoi Noss Peninsula, a well sunk to 840 feet, yielding an oil similar in character to Pennsylvanian. The first bore hole was started on dry land, whilst the second is being drilled on an isthmus which is sometimes overrun by the sea.

Roumanian Excise Duty.—The excise duty on petroleum in Roumania in July, 1906, brought in to the Government a revenue of 175,205 francs against 133,103 francs in July, 1905. From the 1st of April, when the financial year begins, to July 31st, the receipts from this source amounted to 643,598 francs, which is an increase of 84,489 francs against the corresponding period in 1905.

Concerning Russian Oil Exported to Germany.—The oil exported from Russia over the western land frontier to Germany has to be pumped over at the frontier stations from the Russian tank waggons into the German tank waggons. The cost of this operation amounts to about 1½ copecs per pood. It cannot be avoided, owing to the fact that the wide gauge Russian tank waggons cannot run on the narrower gauged German railways.

The Moreni Company.—The property of the Moreni Co., which is controlled by a Dutch Syndicate, consisting of Messrs. Frits Olie, I. W. de Beer, L. Witte, Gerbrand Olie and R. Van Sickle, on which there are two wells with a daily output of 150 tons, the refinery of the Astra Co. at Ploesti, and the Colibasi property of the Franco-Roumanian Co., with the 16 hand wells and 4 borings, has been sold to a Dutch syndicate, in which the Handels Maatschappij is taking part. A large limited company will ultimately be formed to take over all these properties.

More Roumanian Companies.—A new company is now in course of formation in Roumania for the exploitation of petroleum deposits at a place called Lapadari in the Bacau district. The founders are Mr. Emil Costinescu, late Minister of Finance, and Mr. A. Darvari. A capital of 8,000,000 francs is expected to be subscribed in Germany. Another new company is being formed at Ploesti under the title of the Norocul Co., with the object of taking up concessions of petroliferous lands at Baicoi, Bordeni and Apostolache. The company is expected to commence operations very shortly.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	11-13
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/6-3/0
Bibi-Eybat "Petroleum" Co. ..	£650,000 5½% Pref.	£1	4/6-5/0
Californian Oilfields ..	£250,000 Ord.	£1	7/6-8/6
European Petroleum ..	£550,000 Pref.	£1	6-6½
"	£550,000 Ord.	£1	1/6-2/6
"	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	82-85
Schibaieff Petroleum ..	£600,000 Ord.	£1	10/9-11/9
"	£575,000 6% Pref.	£5	9/9-10/9
Shell Transport & Trading ..	£575,000 Ord.	£1	2½-2¾
"	£2,000,000	£1	6/0-7/0
Spies Petroleum Company ..	£1,000,000 Pref.	£10	29/3-30/3
"	£312,500	10s.	9½-9¾
			7/0-7/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on September 10th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	555	558
Balakhany Naphtha Co.	250	—	—
Caspian Society	1,000	3,900	3,950
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas"	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	141	143
Neft Co.	250	—	—
Nobel Bros.	5,000	8,250	8,350
"	250	—	—
Rops and Co., V.	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Tumaieff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" (Second Issue)	250	—	—

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 13th September, 1906, as follows:—

There is no change of importance to report. Prices are firm, at last quotations, as below, according to time of delivery. Materials continue strong, and many tin plate makers decline to quote for extended delivery.

1c	18½×14	124 sheets	110 lbs.	13/3 to 13/6 per box.
1c	19½×14	120 "	110 "	13/3 to 13/6 "
1c	20×10	225 "	156 "	18/6 to 18/9 "

F.o.b. Wales. Tin lining and iron hooping extra.

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8½ pd	£199,750	£10	19½
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Burmah Oil, Ord.	£1,100,000	£1	59s. od.
Do. Pref.	£250,000	£1	26s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8½
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	20
Do. New (£8 10s. pd.)	£131,750	£10	20
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	6
(17s. paid)			
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	38s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	74s. 9d.
Do. "B" Deb. ..	£150,000	£100	162½

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	—	80	1,000
Aurora (Deb. 5%)	92½	90¾	—
Campina Poiana Mij.	—	39	—
Dordtsche Petroleum Mij. (Pref.) ..	—	121	500
" (Deb. 4½%)	102½	102½	1,000
Elzasser Petroleum Mij.	1¼	1¼	1,000
Gaboes	—	10¾	—
Holl. Rumeensche Petroleum Mij. ..	33½	33	1,000
Int. Rum. Pet. Mij.	99	99½	500
Java Petroleum Mij. (Ord.) ..	99	99	1,000
" (Pref.) ..	—	38	—
Koninklyke Nederl. Pet. Mij. Shares	752	698½	250-1,000
" Share certificates	756	699½	1,000
Mœara Enim Petroleum Mij. ..	137	123¾	100
" 1-1,000 Oblig. 5	101½	101½	250-1,000
" Moesi Ilir " Petroleum Mij. ..	44½	44½	—
Nederl.-Rumeensche Petroleum Mij.	—	17½	—
Nieuwe Ned. Petroleum Mij. And. ..	—	55½	1,000
Oliebronnen in Hannover Mij. ..	125	111½	—
" (Deb. 5%)	98¾	99¾	—
Panolan Maatschappij Cert. ..	350	355	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	135½	135	1,000
" (Common) ..	115½	118¾	—
Sumatra-Palembang Petroleum Mij	79½	79½	50
Zuid Perlak Petrol. Mij. (Pref.) ..	98	88	—

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the fortnight ended August 11th has been nil owing to the strikes, which are now fortunately over.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the fortnight ended August 12th has been nil owing to the strikes.

SPIES PETROLEUM Co., LTD.—The output for the week ended 2nd September was 169,275 poods, or 2,730 tons; and for the week ended 9th September was 193,600 poods, or 3,122 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production has been nil since our last issue.

BORE HOLES FOR OIL

Contracted for by

JOHN M. THOM,

Canal Works,

Patricroft, MANCHESTER.

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THE Journal.

Russia, the work of the specialist, whoever he may be, has been appreciated, and the inevitable consequence has been that the country's petroleum industry has progressed, not so much from a commercial point of view as from the technical skill which has characterised the conduct of the various branches. The same remark also applies to Roumania, Galicia, and America, where the native operating companies have been very flourishing. The necessity of having carefully trained specialists to watch over the various technical branches has not been overlooked, and if we look for a result we see it in the success which almost invariably has followed the career of the concerns devoted to the development of the petroleum industry.

But unfortunately this progression in things technical in connection with the petroleum industry cannot be recorded in connection with the advent of the English capitalist in the foreign petroleum fields. He has had no sympathy with the specialist, looking upon him frequently as an evil genius to be avoided, and in place of the true technical man, each English company has in turn laid hands upon a gentleman who is put forward with the abilities mentioned in our text. A little thought, and one must see how absurd has been the position held by this "Jack-o'-all trades" from the first. His knowledge at the best has been very superficial, while of the many technical matters so closely associated with the conduct of an oil company, he has been entirely ignorant. Little surprise is it then to find that the majority of the English companies formed during the past ten years have achieved such miserable results. Even at the outset, instead of entrusting the preliminary investigations upon the acquired territory to a properly qualified and scientifically experienced geologist, the companies have generally called in the services of the optimistic gentleman who, though possessed of no qualifications to survey a territory or suggest the most desirable spots for the drilling of borings, always presents a highly favourable report which is swallowed by the unwary investors. It has often occurred to us that flowery optimism is the chief, if not the one qualification nowadays necessary to make a successful oil "expert," but be this as it may, it is very regrettable that this spirit of amateurism has prevailed so long in connection especially with the English companies connected with the petroleum industry.

Possibly the fact that the majority of the directors of these oil companies are for the most part ignorant of oil field matters, explains in some way why the legitimate specialist in geology, chemistry, or boring has not been received with open arms by the English companies. Still the fact remains that the serious technical man now finds that the positions to which he aspired, and which he is well qualified to fill, are now occupied by persons—call them oil "experts" if you will—whose knowledge of oil field geology, or even of petroleum matters generally, is as vague as it can possibly be.

What would be the position of the petroleum industry and the many English companies engaged therein if only the specialist had been more encouraged rather

than the optimistic gentleman who poses as an "oil expert" we can only imagine by remembering the distinct advantage which knowledge has over ignorance.

These are the impressions forced upon us after a cursory glance through the pages of the two valuable publications which have reached us this week, one from the pen of Professor Hoeffler dealing with petroleum geology and the theories of its formation, and the other from Mr. Rakusin, going comprehensively into the chemical investigations of petroleum. During recent years we have seen quite a number of publications issued dealing with petroleum, and it is with a full knowledge of the contents of the majority of those books, where attempts have been made to describe the various branches of the petroleum industry from a scientific and technical point of view, yet with which the author's themselves have had a very remote acquaintance, that we welcome the appearance of these two serious works written by gentlemen whose lives have been spent in connection with these special branches of petroleum science, and therefore whose opinions are weighty. There surely was never a time when a greater need was felt for the specialist than is the case to-day.

LONDON OIL SHARE MARKET.

FRIDAY, SEPTEMBER 14TH.

The clouds of depression which have for so long overhung the Oil Share Group on the London Stock Exchange appear to be at last dispersing, and we are pleased to report a decidedly better tone all round, with enhanced values in several instances. The decision of the directors of the Bank of England to raise the rate to 4 per cent. has acted favourably upon the general markets, and augers well for immediate future movements all along the line.

On Tuesday week, California Oilfields were a closer price at $5\frac{1}{2}$ -6, but Refineries were a shade easier at the wider quotation of $\frac{5}{8}$ - $\frac{7}{8}$ on Wednesday. With Thursday's dealing the better tone set in, Russian Ordinary leaving off 1s. better at 9s. to 10s., and the Preference 6d. at 10s. to 11s.; and on Friday Californian Oilfields rose to $5\frac{3}{4}$ - $6\frac{1}{4}$, Russian Ordinary to 9s. 6d. to 10s. 6d., Preference 11s. to 12s. and Shell Transport Preference to $9\frac{1}{2}$ - $9\frac{3}{4}$.

The only alteration since has been an advance of 6d. per share in Schibaieff Ordinary, but quotations have been well maintained in other directions.

At the mid-September carry over on Tuesday, Cantango rates were inclined to be stiffer; oil shares being continued at about 6 per cent. to 8 per cent. Alterations in making-up prices from those fixed at the end of August account are as follows:—

Advances:— $\frac{5}{8}$ in Californian Oilfields at $5\frac{1}{8}$, $\frac{3}{16}$ in Schibaieff Preference at $2\frac{1}{16}$, 2s. in Russian Ordinary at 10s., 1s. 9d. in the Preference at 11s. 6d., 6d. in Spies at 7s. 6d., and 3d. in Shell Transport Ordinary at $1\frac{1}{2}$.

Declines:—6d. per share in Anglo-Russians at 1s. 6d., and 3d. each in both Baku Ordinary and Preference at 2s. 9d. and 5s. 3d. respectively.

Latest quotations are given on page 150.

THE BRITISH ADMIRALTY AND LIQUID FUEL.

The series of oil-fuel experiments which are now being carried out on board the destroyer "Spiteful" at Portsmouth, in order to ascertain the relative values of the various oils, again directs attention to the most interesting and important subject.

Some time ago the Admiralty decided that all new destroyers to be built should rely entirely on fuel for their motive power. Torpedo-boats in the Italian Navy have been worked by this means for many years past, and the practice is stated to be entirely satisfactory. In Italy, *astaki*, which is the residuum of Russian petroleum, is used and comparatively cheap, but, on the other hand, in Great Britain liquid fuel is three times as expensive as coal.

To burn oil successfully, it is necessary to reduce it to particles of the smallest possible size, and to bring it into intimate contact with the air required for its combustion. In motor-engines, either entire or partial gasification of the fuel is obtained just previous to burning it, and the nearer this ideal condition of complete gasification is approached the better becomes the combustion in a boiler furnace.

To produce fluidity and as much gasification as possible the oil should be heated to as high a temperature as allowable within safe working limits; but, although this limit may be anything between 400° and 600° F., it is advisable for practical reasons to limit it to about 20 degrees below the flash-point, or, say, to 200° F., for the oil fuel used in the navy. This practical limit is set by the rapid deposition at higher temperatures of soot on the surfaces of the heater, and consequent decrease of efficiency and duration of useful working without cleaning. Possibly the most convenient, economical and safe method of heating the oil previous to injection into the furnace is to take the supply of heat from the auxiliary exhaust steam pipe.

There are three principal methods in common use for injecting the oil into the furnace; either by spraying with the aid of steam, or with the aid of compressed air, or by injecting the oil under pressure through a nozzle, similarly to water from a fire-hose.

For naval purposes, says our contemporary the *Navy and Army*, the use of steam for spraying is practically prohibited by the consequent loss of fresh water, and the necessary addition of increased evaporative plant to maintain the supply. Reports of the actual loss in this way vary from 2 up to 5 per cent. of the total weight of steam produced from the boiler, and thus in a naval vessel steaming at 10,000 i.h.p. would be from 36 to 90 tons per day of 24 hours. There are other objections to steam spraying into which it is not necessary to enter.

Compressed air, especially if heated previously, is a very convenient and economical method of spraying. The air supports combustion, which steam does not, and in conjunction with the Howden system of hot air and closed ash-pit draught excellent results may be expected. But it is as well to state here that no system is entirely satisfactory with the high rates of combustion correspond-

ing to the usual full power coal consumption of the early destroyers and torpedo-boats. Injecting the oil under pressure leads to considerable difficulty in the atomising or pulverisation of the fuel into sufficiently minute particles of spray. There is a tendency for the oil to retain some semblance of a continuous stream of particles held together by molecular attraction. With a high pressure, the oil is likely to be carried too far towards the back end of the furnace, and with a low pressure not far enough; and thus, as in most mechanical arrangements, some compromise is arranged to meet the special requirements of each particular case.

Burners of all types have the outward appearance of a fire-hose nozzle, the nose of which projects through the casing into the furnace in the vicinity of what would be the fire-doors in a coal-fire boiler. A number of such nozzles or liquid fuel burners, may spray into one furnace, and by utilising a certain proportion of this number the power can be varied within moderate limits. Near the burners provision is made for the supply of air to support combustion, and to quote a few figures it may be stated that for two boilers in a coastal destroyer of 4,000 i.h.p., about 600 gallons of oil must be burnt per hour, and that each gallon of oil requires about 14,000 gallons of air for its combustion. Thus the opening in the burner, through which the oil is sprayed, is extremely small, say about one-twentieth of an inch in diameter, while it is somewhat difficult to provide sufficient area of opening through which the air can pass. So rapid is the movement of the air and of the gases, formed by combustion, through the boiler that only a very small fraction of a second elapses between its entry and their exit to their uptake and funnel. During this time a temperature of about 3,000° F. is attained in the furnace, and the temperature decreases to about 500° or 700° F. by the time the gases reach the uptake.

For battleships and large cruisers the coal fires become choked with clinker after steaming with full power for eight hours. With a supply of oil fuel, the period of full-power steaming can be prolonged by spraying oil on the coal fire, and, with the mixed combustion of the two fuels, the additional heat given out by the oil compensates the loss from dirty fires.

THE BAKU OIL MARKET.

In consequence of the strikes, the shortage of oil on the market is becoming more serious. The price of crude oil has gone up to 32-32½ copecs per pood. Residuals are sold at 35-35½ copecs, and kerosene at 40 copecs. The Baku Oil Exchange is inactive, both buyers and sellers having assumed a waiting attitude. In the liquid fuel trade affairs have reached a critical stage, for even at the high price ruling the oil is exceedingly difficult to obtain, for the buyers are in urgent need of the fuel oil, whilst sellers, in view of the uncertain state of the trade, are most reluctant to sell. Things are less critical in the kerosene trade, and shipments are proceeding in a fairly regular manner.

The troubles of the home market have put the question of the export trade entirely in the shade.

The Caspian and Volga tank fleet, in view of the reduced shipments from Baku, is working very slowly, and part of the fleet is lying idle for want of cargoes.

THE BURMAH OIL COMPANY'S EXTRAORDINARY MEETING.

THE SALARY OF THE MANAGING AGENTS.

An extraordinary meeting of the Burmah Oil Company was held on Thursday in the Masonic Hall, Glasgow—Mr. J. T. Cargill, the chairman, presiding.

The Chairman, in the first place, intimated, with great regret, that owing to slight indisposition Mr. Innes was unable to be present. As he was personally interested in the matter, he would prefer not to make any remarks on the resolution or take any part in any discussion, merely performing the offices of chairman and answering any questions pertaining to the business of the meeting. If they thought it desirable, he should be pleased to vacate the chair.

Mr. Leonard Gow then moved a resolution to the effect that in place of a commission of 5 per cent. on the gross value of the sales made by themselves directly, and of 2½ per cent. on the gross value of sales made by or through sub-agents, the managing agents, Messrs. Finlay, Fleming and Co., Rangoon, shall be paid a fixed annual salary of £15,000 and a commission of 2½ per cent. on the profits of the company, and that the necessary alterations be made on the articles of association. He explained that the directors had given the subject long and earnest consideration, and that they had at length come to a unanimous decision. It was a question that could only be fully considered and decided upon by those who had full knowledge of all the conditions and requirements not only in the present but also for the future. Outsiders could not have this knowledge. It was only the directors who from their long and intimate acquaintance with the whole work and requirements and anxieties of the company, could possibly have this knowledge, and if the directors possessed their confidence in the past, surely they had achieved a claim for the confidence of the shareholders in a matter of this sort. £15,000, or even £5,000, seemed large sums to many without great experience. But if they asked men who had been engaged in commercial pursuits, especially in the management of a concern of so great magnitude, and involving such responsibility, and asked them if £15,000 was too much for a fixed portion of the remuneration, with only an addition of 2½ per cent. commission on the profits, especially under the conditions of an Eastern climate, they would tell them that it was inadequate.

Mr. Wallace seconded. One reason why he did so was because he was most intimate with the many and manifold requirements which this company made upon their managing agents abroad. He had been connected with many and diverse companies, and than petroleum there was no business in the world which required greater care, or which depended for its success or failure upon foresight and diplomacy on the part of the men in charge of its concerns. They must look for these qualities to their managing agents in Burmah. As to the magnitude of the work, he might tell them that during the past four years, under the able guidance of their managing agents, the output of burning oil had quadrupled, and the output of candles had more than quadrupled. Their fleet of steamers had been raised from two small boats to five, all well equipped and organised. They had then one hulk installation in Calcutta, whereas they had now five. The European staff out in Burmah had more than doubled, and the native staff was yet more largely increased. They had made enormous strides, and the shareholders would be proud to know that they were by a long way the greatest industrial concern in our Indian Empire. During the four years they had put £578,000 to reserve out of profit, for depreciation £241,000, and had paid in dividend £538,000, exclusive of interest on debentures, etc. This had not been done by the unaided efforts of the board of directors, but was largely due to the business ability of the managing agents. The company, if properly managed, would go on still increasing, but they required good servants. They had good

servants, but to keep them they must not be niggardly with them. They must pay them well. Upon their managing agents fell the task of dealing and negotiating with several Governments, and competing with many companies, both British and foreign, in every part of the globe. The board had appraised these services at the price they put down in the resolution. They had not led the shareholders astray in the past, and they could trust them now.

Mr. Fred A. Macquisten moved as an amendment that, instead of £15,000, the salary of the agents should be £5,000. He associated himself with all that had been said by the previous speakers with regard to the managing agents, but he was still unconvinced by the arguments which had been used, and he intended to persist with his amendment. He did not say in his circular that if the agents were not reappointed the business would come to a standstill. What he did say was that the agents should be the servants, not the masters of the company. Mr. Wallace said that they required servants of a very high character. They could get good service from the directors. He considered that the remuneration paid to the directors—£200—was totally inadequate. The reform required was to put the directors on a right footing in this respect, and let them do the proper work of directors. Managing agents were an anachronism after a company was fully developed.

Mr. Macdonald seconded the amendment.

Ex-Bailie Murray asked whether the managing agents had anything to do with the starting of the company, and whether they were responsible for the bad debts.

The Chairman said that in the past the sub-agents' commission covered the guarantee, and that arrangement would be continued.

A Shareholder asked how many shares Mr. Macquisten held.

Mr. Macquisten said he held ten shares, but he represented 100,000.

A Shareholder said he strongly resented this agitation, and the shareholders who were responsible for it should come into the open.

Mr. Macquisten said the shareholders were in the open. Those who could not be present had given proxies.

Sir Boverton Redwood said that Mr. Macquisten had in his circular characterised the salary of the agents as extravagant, but, speaking of what he knew, the speaker believed that instead of being extravagant it was very moderate. He had had thirty-six years' experience in the capacity of confidential adviser to nearly all the great petroleum organisations of the world, and he said it would be simply impossible without seriously imperilling the interests of the company, to discuss in detail the nature of the services the value of which was in dispute, or to place the shareholders in a position to appraise the value of those services. In the capacity he had indicated he had had many opportunities of learning how difficult it was to obtain such services as those which had been ably and faithfully rendered by the agents. Mr. Macquisten had suggested that the organisation of the company was so complete that its work could be done by the officials of the company. But Mr. Macquisten knew nothing of the multiplicity of the subjects which demanded at the hands of the managing agents constant vigilance, watchful care, and, above all, diplomatic ability. If he (Sir Boverton Redwood) could speak freely of what he had in his mind, he was perfectly certain that there would not be a single supporter in the room of the amendment.

The amendment was then put to the meeting, and it was defeated by a large majority.

The Chairman then put the resolution, and it was carried by a majority, only some five or six hands being held up in opposition.

Mr. Macquisten demanded a poll.

The Chairman said that such a request must be supported by five shareholders, and he requested those in favour of a poll to stand. Only Mr. Macquisten rose in response, and the resolution was declared carried.

WHY AMERICAN PETROLEUM EXPORTS ARE DECREASING.

A SIGNIFICANT WARNING.

The letter which we here reproduce from the pen of Mr. F. D. Asche, of the export department of the Standard Oil Co., sends forth a significant warning broadcast as to the effect—the very disastrous effect—which the American export trade is feeling as a result of the wanton attacks made by irresponsible persons, and no less by responsible journals against the Standard Oil Co.

The success of this mammoth concern, built up by years of energetic perseverance, backed by almost unlimited capital, has been a thing to conjure with in the imagination of writers, as it has also been a plaything for the American President. The English and foreign press has indeed been happy to find a peg whereon to hang the threads of criticism, and as we know this has gone on, month in and month out, until now its effect is beginning to be felt. Mr. Asche sums up the whole situation, to which we refer in our leader columns, in his letter which is as under:—

“Every producer of petroleum in the United States, and all individuals or companies having direct or indirect interests in maintaining the supremacy of American petroleum in the competitive markets of the world, cannot fail to view with deep concern and alarm the damage and menace to our foreign commerce, traceable to the persistent attacks upon the Standard Oil Co. by an influential section of the American press.

“We deem it our duty especially to call your attention to the embarrassment thus created for the managers, agents, and salesmen employed in the marketing of American petroleum and its products in foreign countries.

“We cannot believe it is the intention or the desire of the American press to jeopardise the export commerce of all American petroleum or that its attacks upon the Standard Oil Co. have any such motive, yet unfortunately, these attacks are rapidly leading up to this result.

“Confirmative of this, we just have word from one of our managers abroad, who had made application to a foreign government for permission to erect a storage plant to receive bulk American petroleum, and was refused. At the time when the question came up for decision the President's message to Congress regarding the Standard Oil Co. had just reached them, and this was given by the authorities as a reason for their refusal of the application.

“The foreign press and the foreign consumer know little and care less about the transportation controversy raging on this side of the Atlantic, but they have not been slow to construe and distort these press attacks, as discrediting the quality and value of the product and also as assailing the distributors, and our marketing methods throughout the world.

“The formidable competitors to American petroleum, Russian, German, Roumanian, Galician and Oriental, are very naturally utilising these press attacks to their own great advantage and to our detriment. And this at a time when the petroleum of this country needs an increased outlet on account of the largely accumulating stocks above ground due to the immense new oil fields of Kansas, Oklahoma and Illinois.

“Notwithstanding our ramified and comprehensive channels of distribution in nearly every country of the world, which are the outcome of many years of hard work and of great expenditure, we find the competitive obstacles greater from year to year because of the rapidly developing petroleum industries of other countries. These have the marked advantages of nearer proximity to large consuming centers, and of pauper labour employed in production, and stimulated by the support of their respective governments and active encouragement extended by their local press.

“Is there no way of presenting this situation to the impartial elements of the American press with the hope that even if their attacks upon the Standard Oil Co. are to be continued, these may be formulated on lines not calculated to give aid and comfort to every foreign enemy and competitor of the American petroleum industry?

“The largely increasing stocks of petroleum in this country emphasise the necessity of extending, rather than curtailing, the output of American petroleum for foreign countries. This output now represents about 60 per cent. of all the refined oil manufactured in the United States.

“F. D. Asche.”

THE ORGANISATION OF THE GALICIAN PETROLEUM INDUSTRY.

AN IMPORTANT PROPOSAL.

Details are to hand of a proposal which has been recently formulated by the Vacuum Oil Co., and submitted to the Galician petroleum producers, the affect of which scheme, if carried out, will be to organise the producers in Galicia. The main conditions of the scheme are, as under:—

1. A limited liability company is to be formed for the sale of Galician crude oil on commission, and to make advances to the producers. The amount of the capital is to be agreed upon between the producers and the Vacuum Co. The latter will provide the whole of the share capital and hold the shares as security.

2. The new company will undertake the sale of the crude oil of the producers on commission, and advance to them 27½ kronen per ton, of which, 22½ kronen in cash, and 5 kronen will be credited on account of the shares allotted to the producers.

3. The producers will themselves fix the price and terms of the sale of the crude oil.

4. The advances of 27½ kronen are not returnable.

5. The shares are to be made out in the names of the respective producers, and can be transferred only with the consent of the directors of the company.

6. The Vacuum Oil Co., in return for financing the scheme, are to receive the crude oil required by them at a reduced price during the whole term of the arrangement. The extent of this rebate is to be agreed upon between the Vacuum Oil Co. and the producers. The quantity of crude oil bought at this reduced price is, however, not to exceed 25 per cent. of the total output of the producers joining the company.

This proposal has been favourably received by a certain number of the Galician producers, and on the 22nd of August a meeting of producers was held in Drohobycz to consider the same, a committee being elected to confer with the Vacuum Oil Co. on the subject. At the same time, the negotiations with the Petrolea Co. have not been broken off, the whole matter remaining in abeyance for the present.

MISCELLANEA.

BAKU PRODUCTION DURING THE FIRST HALF OF AUGUST.

According to telegraphic information from Baku, the output of crude oil at the oil fields during the first half of August (o.s.) amounted to 11,200,000 poods.

ROUMANIAN PETROLEUM EXPORTS IN JULY

The exports of petroleum products from Roumania during July, 1906, according to official statistics, were as follows (in tons):—

Destination.	Crude oil, distillate, Illum. gas oil, etc. oil.	Benzine.	Total.
England	1 12,144	1,412	13,557
Italy	8 4,411	—	4,419
Germany	197 —	3,610	3,807
Turkey	51 2,027	—	2,078
Austria-Hungary ..	1,459 —	45	1,504
Bulgaria	50 287	11	348
Holland	— —	11	11
Total in July, 1906 ..	1,767 18,869	5,090	25,726
„ „ 1905..	3,711 2,509	4,301	10,521

NATURAL GAS FOR CALIFORNIAN TOWNS.

A number of towns in California are already using natural gas for lighting and power purposes, and the latest town which it is proposed to furnish with natural gas is Berkley, for which system the California Gas and Electric Company is now laying down pipes. One unique feature about the supply of the illuminant to Berkeley is that the waste oil from the Standard Oil Company's refinery at Point Richmond will be utilised. The gas is to be forced through the pipe by means of compressors, and hydraulic pressure will reinforce the vapour along until it will have a minimum pressure of 100 pounds to the square inch.

THE DISCOVERY OF PETROLEUM DEPOSITS ON THE URAL.

Up to the present time the mazout used as fuel at some of the works on the Ural is brought up from Baku, and although for iron making oil fuel has many advantages over wood fuel, particularly in view of the growing scarcity of the timber on the Ural, the use of oil fuel there is making no progress, chiefly owing to the difficulty and heavy cost of transport. There is now, however, the probability of the Ural having its own oil production. Outcrops of petroleum have been discovered on the river Bielaia, eighteen versts above the town of Sterlitamak in the Ufa Province. A geologist of the Russian Mining Department has recently made investigations and found that the oil on the river Bielaia oozes from greyish steeply placed formations of the Perm series. In some parts the oil soaks through river alluvia and forms small goudron deposits. Apart from this, for a length of five versts from the village of Buran

to Ishimbaeff island, bubbles in some places rise up to the surface of the river in brown and rainbow coloured circles. The whole locality round these outcrops was investigated, and it was ascertained that the oil bearing sandstone layers lie in red formation of the Perm series, which in the locality in question are disturbed by the outcrops of upper coal and Perm carbon formations. The former are laid bare on Tcheketau Hill, near Sterlitamak, and the latter on Taratan Hill, near Urmiak-Bish-Kodak. For a thorough exploration of this oil deposit it is proposed to sink in shallow boreholes, which will shew where the ground is most impregnated with and where deep borings are to be started.

PRODUCTION OF CRUDE OIL IN GALICIA IN JULY.

The production and deliveries of crude oil at the Galician oil fields in July and the stocks at the end of that month, according to official statistics, were as under:—

Field.	Production. Tons.	Deliveries. Tons.	Stocks on 31st July.
West Galicia—			
Potok	1,370	2,151	6,300
Rogi	790	2,610	7,183
Rowne	92	116	199
Tarnawa-Zagorz-Wielopole	2,920	301	6,511
Krosno	2,500	2,567	11,952
Other West Galician fields	2,800	2,702	10,703
East Galicia—			
Boryslaw-Tustanowice	48,790	56,068	366,765
Schodnica	4,070	7,232	30,859
Urycz	1,220	1,228	14,931
Mraznica	120	245	1,339
Other East Galician fields	1,050	840	300
Total	65,722	76,060	457,052

Loss by leakage and oil used as fuel at the wells together amounted to 2,114 tons, of which 1,400 tons falls in Boryslaw-Tustanowice.

The total stocks of crude oil have during the months of July decreased by 12,452 tons. The stocks at the Boryslaw-Tustanowice field taken separately shew a decline of 8,678 tons.

PRODUCTION OF THE ROUMANIAN REFINERIES IN JUNE, 1906.

The output and deliveries of various petroleum products by the Roumanian refineries in June, according to official statistics, were as follows:—

	Output in June, 1906.	Deliveries for Home Consumption.	Stock on 30th June, 1906.
Benzine	10,078	43	13,795
Refined Oil and Distillate	20,610	1,387	36,645
Lubricating Oils	5,376	832	18,627
Residuals	29,491	16,804	77,817
Total	65,555	19,066	146,884

There was no paraffin scale produced in June, the deliveries of this product for home consumption amounting to 7·8 tons; the stocks on the 30th June were 19½ tons.

KEROSENE AS MOTOR FUEL.

A NEW CARBURETTOR WHICH MAKES KEROSENE A GOOD SUBSTITUTE FOR PETROL.

For a long time the minds of inventors have been turned to the problem of perfecting a carburettor for motors which would allow the use of kerosene as a fuel instead of the lighter and more expensive product petrol. The great difficulty of the past has been to get rid of the smoke and smell caused by imperfect combustion of the oil, the consequence being that the valves soon became sooted up, and the carbonisation of the interior of the cylinders was brought about. The kerosene carburettor has not hitherto been an unqualified success. True, it has been largely used for marine motor engines, but in connection with motor cars they have not been a success. But inventors have nevertheless been busy, and at last what is said to be a kerosene carburettor, which can be adapted to any motor car, has made its appearance, being called the Dorwald paraffin carburettor. Like most important inventions, the Dorwald carburettor is very simple. The carburettor is jacketed in such a way that the hot gases from the exhaust can vapourise the kerosene. A small subsidiary tank of petrol is carried, and the engine is started with the lighter spirit. After about four minutes the paraffin is heated to a point at which it will readily vapourise, and then automatically the petrol is cut off, and the paraffin is brought into use. The same automatic action opens the air-valve to admit the much larger supply of air necessary to effect complete combustion of the heavier oil. The automatic device is a disk chamber connected with the carburettor.

In this are other disks which expand under the action of heat, and this expansion works a lever fulcrummed in the suction pipe, one end cutting off the petrol feed and the other opening up the oil supply, whilst at the same time it also opens the valve to admit more air for the heavier mixture. There is nothing to get out of order, the action being dependent solely on the heat of the paraffin in the carburettor.

A trial was made of the new carburettor the other day near London, and it behaved most satisfactory.

THE OAKBANK OIL COMPANY.

An extraordinary general meeting of the shareholders of the Oakbank Oil Co. was held in the Religious Institution Rooms, Glasgow, on Wednesday of last week, for the purpose of confirming the resolution passed at an extraordinary general meeting of the company on August 8th last. Mr. John M. Easton occupied the chair.

The Secretary (Mr. Robert C. Miller) having read the notice calling the meeting,

The Chairman said—Before entering on the business of the meeting, I may be permitted to refer to the death of our late chairman, Mr. A. R. Gillespie, which took place on August 9th, only one day after our last meeting. Mr. Gillespie was one of the original promoters of the company in 1869. He was a director from the start of

the company until his death, and filled the position of chairman since 1900. He was always loyal and helpful to the interests of the company, and in the discharge of his duty as chairman and director he was distinguished by a high sense of honour and of sympathy and aid in every difficulty. As colleagues and friends, the directors, and I am sure those of the shareholders who knew him, regret the loss they have suffered. This meeting, the Chairman proceeded to say, is entirely of a formal character and is being held for the purpose of confirming the special resolution that was adopted at the extraordinary general meeting held on August 8th. I need not detain you by explaining the various causes and reasons that have led to the adoption of the special resolution in question. The circumstances must all be fresh in your memories. I therefore move that the following special resolution be confirmed, namely:—“That each of the 20,000 ordinary shares of £10 in the capital of the company, whereon £8 10s. is paid up, be sub-divided into ten ordinary shares of £1 each, with 17s. per share credited as paid up thereon, and that the shares resulting from such sub-division be numbered consecutively 1 to 200,000.”

Mr. Charles Fraser, Melrose, seconded, and the resolution was adopted.

PETROLEUM IN THE MIDDLE AGES.

A writer in *Nature* points out that the names “petrol” and “petroleum,” and the product itself, were familiar at least as far back as the middle of the fourteenth century. In the Slade MS. (fifteenth century) mention is made both of rock oil and of the correct derivation of the name, which is mediæval Latin: “*Petroleum-oleum factum de petra* (oil made from rock—in French, *petroille*.)” The word “petrol” (or petreol) disappeared from English, and did not return until the days of the motor car industry, when it was reintroduced from the French in the sense of refined petroleum. The first mention of petroleum in North America is due to the Franciscan Father de la Roche d’allion in 1629. Albaro Alonso Barba, of Postosi, mentions it eleven years later, in 1640, in “The Art of Metals,” translated by the Earl of Sandwich in 1663. The part referring to petroleum is contained in the following extract:—“La napthe is a sulphurous liquor, sometimes white and sometimes black, and is that which is called Oyl of Peter, of admirable vertue to cure old pains, proceeding from cold causes. It will draw fire to it (as the Loadstone does iron) with that force that it will take fire at a great distance from the flame, as hath been confirmed by the miserable experience of the Conde de Hercules de Icontrarii, of the country of Ferara, who, having a well in his ground, the water whereof was mixed with petreol; and by some breaches or cracks in the well, much of its water ran to waste; commanded it to be repaired; the labourer that was let down into the bottom of the well desired a candle, the better to see his work, which was furnished him in a lantern, the naptha sucked the flame into itself, and set fire on the whole well, which discharged itself instantly like a great piece of cannon, and blew the poor man into pieces and took off an arm of a tree that hung over the well.”

AMERICAN PETROLEUM EXPORTS.

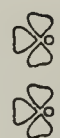
STATISTICS FOR JULY.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during July were as under:—

	1905. Quantities. Gallons.	1906. Quantities. Gallons.
CRUDE—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	4,744,573	—
New York	—	7,071
Philadelphia	223,380	5,567,370
Galveston	3,791,931	—
Total	8,759,884	5,574,441
Total value for the month, 1905 .. ..	.. ..	\$430,199
" " " 1906 .. ..	.. ..	\$343,098
NAPHTHAS—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	597,145	1,476,058
Philadelphia	841,933	9,000
Galveston	—	—
Total	1,439,078	1,485,058
Total value for the month, 1905 .. ..	.. ..	\$118,879
" " " 1906 .. ..	.. ..	\$149,852
ILLUMINATING—		
Baltimore	530	3,487
Boston and Charlestown	9,134	59,119
Delaware	20	—
New York	41,448,463	38,895,431
Philadelphia	29,531,036	27,677,670
Galveston	5,404,383	1,267,058
Total	76,393,565	67,902,765
Total value for the month, 1905 .. ..	.. ..	\$4,587,520
" " " 1906 .. ..	.. ..	\$4,413,101
LUBRICATING AND PARAFFIN—		
Baltimore	176,450	395,003
Boston and Charlestown	6,743	17,675
Delaware	—	—
New York	5,789,859	5,101,544
Philadelphia	1,517,085	2,464,567
Galveston	250	35,000
Total	7,490,387	8,013,789
Total value for the month, 1905 .. ..	.. ..	\$919,049
" " " 1906 .. ..	.. ..	\$996,667
RESIDUUM—		
Baltimore	—	—
Boston and Charlestown	—	—
Delaware	—	—
New York	3,970,300	3,609,350
Philadelphia	5,764,425	80,625
Galveston	926,463	1,242,300
Total	10,661,188	4,992,275
Total value for the month, 1905 .. ..	.. ..	\$314,115
" " " 1906 .. ..	.. ..	\$145,687
TOTAL MINERAL OILS—		
Baltimore	176,980	398,490
Boston and Charlestown	15,877	76,794
Delaware	4,744,593	—
New York	51,805,767	49,149,454
Philadelphia	37,877,859	35,799,232
Galveston	10,123,027	2,544,358
Total	104,744,103	87,968,328
Total value for the month, 1905 .. ..	.. ..	\$6,399,762
" " " 1906 .. ..	.. ..	\$6,048,405

YOKOHAMA IMPORTS IN JUNE.

During June there were 2,035,980 gallons of kerosene imported into Yokohama, as compared with 1,150,000 gallons for the corresponding period of last year. The total value of the former quantity was 447,020 yen, as against 230,000 yen for the similar period last year. For the half year, Yokohama has imported 7,085,902 gallons of kerosene, to a total value of 1,492,010 yen.



AMERICAN NOTES



Sale of Oil Refinery.—The Oil Well Supply Co. recently secured at auction the refinery of the Austin Oil Refining Co. for slightly over \$10,000.

The California Oilfields Company, Ltd.—It is reported that two wells of the California Oilfields Co., Ltd., are nearing completion, and that one of them is in the oil sand.

New Canadian Pipe Line.—The Canadian Transit Co. has recently laid a pipe line from Petrolia to Froomfield, at which latter place large storages are to be built.

Excursions to Oil Fields.—A now favourite rendezvous for excursionists are the Casey oil wells in the State of Illinois where excursion trains land passengers right in the midst of the oil producing section. Here there are now more than 500 producing wells. One of the main attractions advertised for a recent excursion was the shooting of an oil well with forty quarts of nitroglycerine.

In Lawrence County.—Amid the development operations at present proceeding throughout the Illinois fields, Lawrence county is coming in for a good deal of attention. At first, the general opinion was that this district would never be much, but it is now doing even better than Clarke county did in its early stages of development. The county is now full of oil men, and all the available land has been leased.

An Immense Reservoir.—An immense reservoir is being constructed in Hamilton county, which, when completed, will be the largest asphaltum-lined reservoir in the world. It will have a capacity of 400,000,000 gallons or about 10,000,000 barrels. The asphalt for this reservoir is being supplied by the California Asphaltum Sales Agency of San Francisco, and 2,000 tons of the material are being used for the work.

Better Prices for Coalinga.—The *Pacific Oil Reporter* states that the producers in the Coalinga field are quite encouraged over the outlook for better prices, and some state that during the next three months there will be 60 per cent. oil. About one-third of the operating companies in the field have shut down, and the majority of the other companies have expressed their willingness to do the same in order to bring about better prices.

Another Drop in Oil.—Adverse market conditions and excessive stocks above ground has caused another cut to be made in the price of oil in the Indian territory fields. The price has been now brought down to 36 cents, as against 52 in June. One of the effects of this fifth reduction in six weeks has been to minimise drilling operations, and as a consequence many of the drillers have gone to other and more immediately promising fields.

Oil Near Gibson.—A report published in the *Bartlesville Weekly Examiner* states that oil has been found at a spot about five miles east of Fort Gibson. The sand was discovered at 745 feet, and the oil is claimed to be of the same specific gravity as that obtained in the Muskogee pool. The spot at which the oil was found is about 11 miles north-east of Muskogee, and it is thought that the new well indicates the existence of a new pool independent of that at Muskogee.

Sedimentary Deposits.—A number of curious facts have been revealed by the recent oil developments in Illinois. In two wells drilled about twelve miles apart, debris of leaves and wood have been taken from these respective wells at depths of over 200 feet. The conclusions are that in ages past water covered a portion of the land, and by washes and sweeps of water the then surface of the earth has been covered up by the additions of mud, sand, gravel and rock from other regions.

Will It Be a New Field?—A press man has recently had a chat with Mr. C. Van Hoy, who has stated that he has every reason to believe that Montgomery county in Texas has valuable oil and gas deposits. The geological aspects of the county are said to be similar to those in the Baku district. As is known, the pressure of gas is so great in many parts of the Texas fields that it has broken through the cap rock and caused what is termed a blow-out. These blow-outs occur all over Montgomery county, and near the town of Willis is one which is no less than three acres in extent.

The American Oil Market.

New York, Week ended Sept 1st.

The feature of the week has been a further reduction in the price of the Lima grades of crude and in refined for export, the avowed intention being to stimulate the foreign demand for American refined, which has languished by reason of the increasing competition abroad. The increasing production of the Illinois and mid-continent fields is the cause for the reduction in the price of crude. In Illinois production is increasing so rapidly that the Standard Oil Co. has found it necessary to promulgate an order, effective at once, notifying operators that only one tank can be taken from each lease in the future, and operators themselves must prepare individual storage. This means the cutting off off of ready revenues for operators there, who may be forced to hold their product for the next two months, until the new pipe line, between Casey, Ill., and Montpelier, Ind., has been completed. In the mid-continent fields the production, says the *Oil, Paint and Drug Reporter*, amounts to about 58,000 barrels per day, and what to do with all the oil being brought to the surface in various sections of the country has become a serious problem. The reports from the older producing States shew a decrease in the number of completions, but there is a large amount of new work under way and efforts to establish extensions to the productive area have not been checked by the unfavourable results which have attended this class of operations during the past few months. Of the completions reported during the past week a small proportion were good producers, the great majority being small pumpers, with a liberal sprinkling of dry holes. We again hear considerable complaint among drillers in the older fields that the business has ceased to be profitable, but, as heretofore stated, there is no cessation in drilling activity. From Texas, the reports have been of the same general character as before given, while stocks are decreasing.

REFINED AND PRODUCTS.—The demand for refined for export has been only moderate during the past week, but it is hoped the further decrease of ten points announced last Tuesday will stimulate the movement. Competition abroad has been very keen, and it appears that all manner of means are being resorted to to displace the American product. The Russians, of course, are not concerned, they having stopped all shipments, and will be unable to do more than supply local requirements for months to come. In the Far Eastern markets the more active competitor is Sumatra, and in Europe Roumania, though some of the other producing countries are extending their trade. The engagements during the past week amounted to about 175,000 barrels, all for shipment in bulk.

The price for barreled oil was reduced on Tuesday to 7.50c. for New York loading, and at 7.45c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are firm at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel.

Cases for export have been in good request, and sales of about 300,000 are reported. The price of plain tops has been reduced to 10c. Freight rates are firm.

Crude for export has been in fair request, and sales of about 30,000 barrels are reported. Pennsylvania crude is quoted at 7.50c. in barrels.

Crude naphtha continues firm. For export, sales of about 5,000 barrels have been reported.

CLOSING QUOTATIONS.

CRUDE.	Week ended	
	Aug 25. 1905.	Sept. 1. 1906.
National Tran, Certificates per bbl.	\$1.58 @ 1.59	\$1.58 @ 1.59
Pennsylvania crude in bbls. per gal.	7.00	7.60
Pennsylvania crude in bulk	4.50	4.50
Residuum, bbls. for export	6.00 1/2	6.00 1/2

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

	Week ended	
	Sept. 1. 1905.	Sept. 1. 1906.
Tiona	1.42	1.68
Pennsylvania	1.27	1.58
North Lima	0.86	0.90
South Lima	0.81	0.85
Indiana	0.81	0.85
CANADIAN OIL:		
Petrolia	1.26	1.30

REFINED—FOR EXPORT.

	Week ended	
	Aug. 25.	Sept. 1.
Cargo Lots for export.. per gal. ..	7.60	7.50
In bulk	4.50	4.40
Philadelphia loading	7.55	7.45

REFINED IN CASES—110 FIRE TEST.

	Week ended	
	Aug. 25.	Sept. 1.
5,000 to 10,000	10.15	10.05
1,000 to 5,000	10.30	10.20

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

	Week ended	
	Aug. 25.	Sept. 1.
120 fire test, S.W. .. per gal. ..	12	12
130 fire test, S.W.	12 1/2	12 1/2
150 fire test, W.W.	13	13
In bulk from tanks	10	10
300 fire test	12 3/4 @ 13 1/4	12 3/4 @ 13 1/4

NAPHTHA AND GASOLENE.

	Week ended	
	Aug. 25.	Sept. 1.
Naphtha, crude, car lots, 68 @ 72 deg.	—	15.00
Gasolene 86 deg.	22.00	23.00

PENNSYLVANIA OIL RUNS from Aug. 24th to Aug. 30th were:—Aug. 24th, 77,985; Aug. 25th and 26th, 171,248; Aug. 27th, 60,739; Aug. 28th, 88,200; Aug. 29th, 89,197; Aug. 30th, 92,833. For the month of July, 2,269,772.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—67,953; 118,500; 85,703; 85,396; 99,672; 95,936. For the month of July, 2,246,206.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended August 31st. and from Jan. 1st., were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	196,600	7,677,600	8,032,200
Refined, cases	297,000	10,091,000	14,735,000
Crude, barrels and bulk..	34,400	1,106,900	734,100
Crude, cases	—	285,000	164,000
Naphtha, barrels.. ..	4,800	254,800	391,600
Residuum, barrels	—	564,200	650,500
Lubricating, barrels	—	213,100	110,700
Total, barrels cde. eq. ..	447,302	16,303,871	18,104,816

CLEARANCES FOR THE WEEK.

During the week ended August 31st, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	7,832,730	302,904,444	340,303,317
Crude	—	232,900	924,344
Naphtha	39,000	13,254,449	9,730,853
Residuum	—	3,612,000	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Aug. 31st. ..	10,443,640
Total from New York, from Jan. 1, 1905 ..	404,788,827
Same period last year	455,262,103
Decrease	50,473,270
From United States, week ended Aug. 31st ..	16,942,454
Total from United States, since Jan. 1, 1906 ..	733,579,560
Same period last year	833,716,760
Decrease	55,137,200

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The "Review" Shipping List.

SEPTEMBER 13, 1906.

The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE ..	La Pallice ..	Philadelphia	L. Aug. 12	GOLDMOUTH	Singapore ..	—	L. Aug. 26
ALCHYMIST	Medi'ranean	—	P. Gibraltar, - Sept. 10	GUT HEIL	Havana	Philadelphia	L. Sept. 6.
AMERICAN	Honolulu & Philadelphia	New York ..	Arr. Aug. 24	HAINAUT (Dch.shp.)	Antwerp	Piræus	L. Sept. 2
APPALACHEE	Yokohama ..	San Francisco	Arr. Aug 1	HARRY	Port Arthur	Cette	L. Aug. 29
APSCHERON	Batoum & Venice	Genoa	L. Venice, Sept. 6	WADSWORTH	(Texas)	—	—
ARAL	Philadelphia	Dover	P. Del. Break, Sept. 2	HELIOS	Tyne	Philadelphia	P. Dunnet Head, Sept. 2
ARAS	Penarth	New York ..	P. Barry Island, Sept. 2	HOTHAM	Rouen	Middlesbro'	L. Sept. 11
ARGYLL	Monterey .. (Cal.)	Astoria	L. Aug. 28	NEWTON	—	—	—
ASTRAKHAN	Tyne	Philadelphia	Arr. Sept. 9	HOUSATONIC	Shanghai ..	San Francisco	Arr. Sept. 8
AUGUST KORFF ..	Bremerhaven	Philadelphia	Arr. Sept. 9	IMPERIAL	—	—	Tr. on Lakes btr U.S. and Can.
AUREOLE	Philadelphia	Dover	P. Del. Break., Sept. 1	JOANNIS COUTZIS	Piræus'	Taganrog ..	Arr. Constant'le, Sept. 7
AZOV	—	—	Trading on W.C. of South Amca.	J. B. AUG. KESSLER	Rotterdam ..	Philadelphia	Arr. Sept. 6
BAKU STANDARD	Venice	Ibrail	L. Sep. 3	JAMES BRAND	Philadelphia	Dunkirk	In Dunkirk Rds, Sep. 10
BALAKANI	Philadelphia	London	Arr. Aug. 27	KURA	Kustendje & Dublin	Manchester	Arr. Sep. 10
BATOUM	Manchester	Port Arthur (Texas)	Arr. Sept. 5	LA CAMPINE	Antwerp	Philadelphia	Arr. Sept. 11
BAYONNE	Tyne	New York ..	Arr. Sept. 11	LA FLANDRE	Ghent	Philadelphia	Arr. Sept. 9
BEACON LIGHT ..	New York ..	Venice	P. Sagres, Sept. 7	LA HESBAYE	Antwerp	New York ..	P. Scilly, Sept. 9
BEME	Rangoon ..	Bombay & Beypore	L. Aug. 24	LA MADALIENE ..	Leghorn	Tunis	Arr. Aug. 16
BLOOMFIELD	Bombay	Philadelphia	Arr. Sept. 9	LA VIGUESA	Philadelphia	Vigo	P. Del. Break, Aug. 1
BORJOM	Alexandria ..	Batoum	Arr. Constant'le, Sept. 23	LACKAWANNA	Philadelphia & Avonmouth	Tyne	Arr. Aug. 28
BRILLIANT	Göthenburg	New York ..	Arr. Sept. 11	LE COQ	Tyne	Philadelphia	Arr. Sept. 9
BROADMAYNE	Tyne	Port Arthur (Texas)	Off I. of W., Sept. 2	LOUTSCH	Messina	Novorossisk	Arr. Constant'ple, May 5
BULLMOUTH	Balekappan	—	L. Sept. 2	LUCERNA	Barrow?	Hamburg ..	P. South Stack, Sept. 12
BULYSES	Cardiff	Balekappan	Arr. Sept. 5 and L. Sept. 12	LUCIFER	Barry	Del. Break..	P. Barry Island, Sept. 5
BURGERMEISTER	Philadelphia	Oxelosund ..	P. Del. Break, Aug. 31	LUCIGEN	Tyne	Philadelphia	Arr. Sep. 2
PETERSEN	—	—	—	LUCILINE	Kustendje ..	Dunkirk ..	P. Dungeness, Sept. 12
CADAGUA	Seville	Philadelphia	P. Sagres, Aug. 31	LUMEN	Philadelphia	Marseilles ..	Arr. Sept. 6
CALCUTTA (Br. bq.)	San Francisco	Shanghai ..	L. Aug. 15	LUX	Havre	Novorossisk	P. Algiers, Sept. 6
CARDIUM	Cardiff	Singapore ..	P. Barry Island, Sept. 8	MAKKAVEI	—	—	Trading in Black Sea
CAUCASIAN	Philadelphia and Cardiff	Liverpool ..	Arr. July 12	MANHATTAN	Messina	Kustendje ..	L. Sept. 5
CHARLOIS	Philadelphia	Amsterdam	Arr. Aug. 17	MANNHEIM	Tyne	Philadelphia	L. Sept. 6
CHESAPEAKE	Tyne	Philadelphia	P. Dunnet Head, Sept. 10	MARGARETHA ..	Messina	Constant'ple	L. Aug. 31
CHESTER	New York ..	Antwerp	P. Dover, Sept. 12	MEXICAN PRINCE	Liverpool ..	—	P. Havana, Aug. 28
CIRCASIAN	—	—	Trading on W.C. of South Amca.	MIRA	Muronan ..	Suez	Arr. Sep. 10.
PRINCE	—	—	—	MUREX	Balekappan	—	L. Sept. 6
CLAM	Balekappan	—	L. Sept. 6	NARRAGANSETT ..	London	New York ..	Arr. Sep. 3
COWRIE	Batoum	—	L. Suez, Aug. 20	NERITE	—	—	Tr. in China Seas
CYMBELINE	Philadelphia	Avonmouth	P. Del. Break, Sept. 2	NEW YORK	Southampton	New York ..	140 miles S.W. of Browhead, Sept. 9
CZAR NICOLAI II.	Hamburg ..	Batoum	P. Gibraltar, Sept. 2	OCEAN	Amsterdam	Philadelphia	P. Scilly, Sept. 11
DAGHESTAN	Manchester	Batoum	P. Eastnam, Sept. 9	ORANJE PRINCE ..	Hull	Mangalia ..	P. Lizard, Aug. 27
DAKOTAH	Hong Kong	San Francisco	Arr. Sept. 6	ORIFLAMME	Philadelphia	Blaye	Arr. Sept. 10
DELAWARE	Manchester	New York ..	Arr. Sep. 7	OSCEOLA	Rio Janeiro	St. Lucia ..	L. Sept. 6
DEUTSCHLAND ..	New York ..	Savona	L. Sept. 7	OTTAWA	Philadelphia	Tampico	P. Sand Key, Sept. 3
DIAMANT	New York ..	Stettin	Arr. Sept. 9	OURAL	Batoum & Dunkirk	Antwerp	Arr. Aug. 25
ELAX	—	—	A. Singapore, Sept. 12	PALEMBANG	—	—	Tr. Sts. Settlem'ts & China Seas
ELISE MARIE	Rotterdam ..	New York ..	Arr. Sep. 19	PAULA	Tyne	New York ..	P. Dunnet Hd., Sept. 2
ENERGIE	Philadelphia	Danzig	L. Sept. 8	PECTAN	London	Emden & Galveston	L. Sept. 12
ERIVAN	Tyne	Batoum	Arr. Const'iple, Sept. 5	PENNOIL	Philadelphia	Dover	P. Lizard, Sept. 11
EUPLECTELA	Philadelphia	—	P. Dover, Sept. 12	PERLAK	Palembang ..	Swatow	P. Singapore, July 28
EXCELSIOR	Hamburg ..	New York ..	P. Dunnett Hd., Sept. 10	PHOEBUS	Hamburg ..	New York ..	P. Tyne, Sept. 28
EZIO	—	—	Coasting Peru	PINNA	Manchester	Port Arthur (Texas)	P. Eastham, Aug. 29
FRANCE MARIE ..	Alicante	Philadelphia	L. Aug. 18	POTOMAC	Plymouth ..	Tyne	Arr. July 16
GEESTEMUNDE ..	New York ..	Hamburg ..	L. Sept. 5	PROMETHEUS ..	Rotterdam ..	New York ..	Arr. Sept. 6
GENESSE	London	New Orleans	P. Lizard, Sept. 6	PRUDENTIA	Middlesbro'	Bremen	L. Sept. 10
GEORGIAN	Tyne	Philadelphia	Arr. Aug. 31				
PRINCE							

Vessel.	From.	For.	Latest Date and Position.
RION	Batoum	Manchester	Arr. Sept. 11
ROCK LIGHT	Kustendje ..	London	Arr. Sept. 9
ROSSIJA	Novorossisk	Hamburg ..	Arr. Sept. 8
ROTTERDAM	Rotterdam ..	New York ..	Off I. of W.,
(Now C. F. Tietgen)			Sept. 1
RUSSIAN PRINCE	Philadelphia	Birkenhead	P. Del. Break,
			Aug. 30
SALAHADJI	—	—	Tr. Sts. Settlem'ts
			& Java Seas
SEMINOLE	Calcutta	San Francisco	Arr. Aug. 28
SILVERLIP	Samboe	—	P. Table Bay,
			Aug. 30
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Newport	Philadelphia	P. Barry Island,
			Aug. 28
SOPHIE	Venice.....	Malta	Arr. Sept. 10
SPONDILUS	Samboe	Thameshaven	Arr. Blexen,
			Sept. 10
STANDARD	Stettin.....	Philadelphia	Arr. Sept. 9
STROMBUS	Cardiff	Singapore ..	Arr. Port Said,
			Sept. 8
SURAM	Penarth	Trieste.....	P. Oitavos,
			Sept. 1
SUWANEE	Tyne	—	L. Sep. 11
SVIET	Batoum	Alexandria ..	Arr. Sept. 5
TELENA	Balekpappan	Singapore ..	Arr. Sept. 6
TEREK.....	Batoum	London	Arr. Sept. 2
TIFLIS	Batoum	Antwerp	Arr. Aug. 31
TIOGA	Philadelphia	Liverpool ..	P. Del. Break.,
			Sept. 2
TONAWANDA	San Francisco	Hong Kong.	Arr. Aug. 15
TROCAS	Balekpappan	—	L. Sept. 2
TURBO	Philadelphia	—	L. Sept. 6
TUSCARORA	San Francisco	Kurrachee	At Kurrachee,
		& Bombay	Aug. 22
TWINGONE	Rangoon....	Cocanada ..	L. Aug. 21
VEDRA	Batoum	Liverpool ..	Cd. Constanti'ple,
			Sept. 7
VILLE DE DIEPPE	Dieppe	Havre	Arr. Apr. 26, in pt.
			Sept. 7
VILLE DE DOUAI	Ibrail	Campana ..	P. Teneriffe,
			Aug. 31
VOLUTE	Newcastle	Singapore ..	Arr. Sept. 2
	(N.S.W).		
WEEHAWKEN	Manchester	Philadelphia	L. Sept. 12
WILLKOMMEN ..	Tyne	Philadelphia	L. Sept. 12
WINNEBAGO	San Francisco	an Francisco	L. Aug 29
(late Kinsman)			

LATEST AMERICAN PRICES.

New York, September 14th.

Refined, in cases, is easy at 10'30; Standard White, 7'60; Credit balances, 1'58c.

PHILADELPHIA, September 14th.

Standard White is still quoted at 7'55.

RUSSIA.

BAKU, September 10th.

The Baku oil market is firm. The prices are: Light crude oil, spot, 32½ copecs per pood; residuals in ships, spot, 35½ copecs; kerosene 40 copecs per pood.

BELGIUM.

ANTWERP, September 8th.

The petroleum market is unchanged. Price of Standard White, spot, 19½ francs per 100 kilos.; and four last months of the year 20 francs.

FRANCE.

PARIS, September 8th.

Illuminating oil is quoted in bulk, in whole tank waggons, 20'25 francs per hectolitre; spirit, 25'25 francs per hectolitre. Special white oil, 28'25 francs per hectolitre.

GERMANY.

HAMBURG, September 10th.

The kerosene market is firm. The price of American Standard White is 7'10 marks per 50 kilos.

ROUMANIA.

September 9th.

Francs.

Crude oil from different fields, including	
pipe line charges, per 100 kgs.	... 3'70-3'80
Refined oil, exclusive of taxes	... 9'00- —
Motor benzine, including taxes	... 16'00-18'00
Benzine, doubly refined	... 24'00-25'00
Residuals in tank waggons, at refinery	... 3'00- —
Paraffin	... 120'00-125'00
Lubricating Oils —	
Agricultural...	... 30-32
Prime	... 35-37
Extra	... 40-42
Royal	... 45-46
In barrels free on rail including octro tax of 12 fcs. per 100 kilo.	

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7'00
Benzine, sp. gr. 0'710-0'715 ...	... 11'00-12'00
„ sp. gr. 0'720-0'725 ...	... 8'00- 9'00
„ sp. gr. 0'735-0'760 ...	... 6'00- 7'00

INDIA.

BOMBAY, August 3rd.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg.	.. ..	Rs. 6 0 2
„ Chester, 125 deg.	.. ..	4 8 2
„ Monkey Brand, 125 deg.	.. ..	4 2 2
„ Bulk, 125 deg. (in local made tins) ..	.. ..	3 10 0
„ 125 deg. (8 Imperial gallons)	.. ..	3 0 0
„ "White Camelia" brand, 125 deg.	.. ..	No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair	.. ..	3 2 0
Borneo oils, in tins, per pair	.. ..	3 2 0
Sumatra "Rising Sun," bulk, per unit	.. ..	3 0 0
„ tins, per pair	.. ..	3 10 0
Silverlight cases, per case	.. ..	4 8 0
Russian, "Anchor," cases	.. ..	4 14 0

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

September 14th, 1906.

Refined Petroleum is unaltered as follows:—Russian and Roumanian, 6½d.; American, 6½d.; Water White, 7½d.

LUBRICATING OILS

remain unchanged:—

- American pale, £7 to £9 10s.
- American dark cylinder, from £7 2s. 6d.
- American filtered cylinder, from £11.
- Shellene, £5.
- No. 1 Russian, £10 7s. 6d.

TURPENTINE.

Turpentine has had a considerable rise since our last report, but has again slackened off and is now once more weak. For spot 46s. 4½d., and September to December, 46s. 6d.; and for the first four months of next year 47s. 6d.

LIVERPOOL OIL MARKET.

September 14th.

Refined oils are quiet, and sellers now quote 5¾d. for Russian, Galician or Roumanian; and 6¾d. to 7¾d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED SEPTEMBER 3RD, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.	LONDON—			
28	London Oil Storage Co. ..	Lub.	2,000	S. Petersburg
28	T. S. Harris and Co. ..	"	4,800	Philadel.
28	Mordaunt Bros. ..	"	6,100	New York
28	Fielder, Hickman and Co. ..	"	23,000	"
28	Anglo-American Oil Co. ..	"	59,800	"
28	" ..	Lub. Gr.	1,400	"
30	G. W. Sheldon and Co. ..	M.L.G.	350	Antwerp
30	T. H. Lee ..	"	595	Hamburg
30	Consolidated Petroleum Co. (Terek)	Lamp	924,800	Batoum
30	" ..	"	489,600	Constantza
30	Mordaunt Bros. ..	Lub.	41,500	Philadel.
30	B. Jacob and Sons ..	"	1,200	"
30	" ..	"	1,200	"
31	J. Hardy ..	"	96,000	"
31	W. Balchin ..	"	10,000	"
31	" ..	"	14,000	"
Sept.				
1	Scott's Wharf ..	"	3,000	Baltimore
1	A. Brown and Co. ..	"	2,400	Philadel.
1	Consolidated Pet. Co. (Aras)	Lamp	1,316,000	Hamburg
1	London Oil Storage Co. ..	Lub.	1,660	"
3	Wilkins, Campbell and Co. ..	M.L.Gr.	3,000	Philadel.
3	Anglo-American Oil Co. ..	Lub.	79,200	"
3	T. H. Lee ..	M.L.Gr.	750	Hamburg
3	" ..	"	180	"
3	G. W. Sheldon and Co. ..	"	300	Antwerp
3	" ..	Lub.	240	New York
3	Fielder, Hickman and Co. ..	"	3,675	"
Aug.	LIVERPOOL—			
28	Wakefield and Co. ..	M.Lub.	2,490	Antwerp
28	Midland Railway Co. ..	M.L.Gr.	260	Boston
Sept.				
1	Geo. B. Taylor ..	Lub.	65,200	New York
1	Rogers and Bright ..	M.Lub.	500	"
1	Meade-King, Robinson & Co. ..	"	18,800	Philadel.
1	" ..	M.Colza	2,400	Philadel.
1	Crew, Levick and Co. ..	M.Lub.	5,590	"
1	" ..	"	4,805	"
1	W. B. Dick and Co. ..	"	18,380	"
1	Liverpool Warehousing Co. ..	"	190	Hamburg
1	Pickford's, Ltd. ..	M.L.P.	370	"
3	Meade-King, Robinson & Co. (Daghestan)	M.Lub.	400,140	Batoum
3	" ..	"	4,980	"
3	Valvoline Oil Co. ..	"	12,505	New York
3	E. H. Kellogg and Co. ..	"	4,000	"
3	Liverpool Warehousing Co. ..	Lub.	12,360	"
3	St. Clare Bryne ..	L.Comp.	375	"
3	W. Gibson and Sons ..	Lamp	2,050	Boston
3	Crew, Levick and Co. ..	M.Lub.	5,400	Philadel.
Aug.	BRISTOL—			
28	E. Stock and Sons ..	"	400	Hamburg
28	W. Smith and Co. ..	"	27,360	New York
28	H. R. James and Sons ..	"	6,200	New York
30	Pickfords ..	L.Paste	940	Hamburg

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Aug.	GRIMSBY—			
28	J. Sutcliffe and Sons ..	Lub.	420	Antwerp
	HULL—			
28	W. Gillyott and Co. ..	"	4,800	New York
29	" ..	M.Lub.	10,400	Hamburg
29	Anglo-American Oil Co. ..	"	19,280	New York
30	Hull & Netherlands S.S. Co.	Tar Oil	2,280	Rotterdam
	MANCHESTER—			
28	J. T. Fletcher and Co. ..	Lub.	1,440	Antwerp
29	Meade-King, Robinson & Co.	M.Lub.	4,800	New York
29	Pickfords ..	M.L.P.	140	Hamburg
30	W. Hodgson and Co. ..	M.Lub.	875	"
Sept.				
3	Bramwell, Fern and Co. (Daghestan)	"	252,620	Batoum
Aug.	NEWCASTLE—			
28	Tyne-Tees S.S. Co. ..	Lub.	440	Hamburg
29	" ..	M.Lub.	4,600	Antwerp
	GLASGOW—			
28	Anchor Line ..	Lub.	14,850	New York
30	J. and A. Allan ..	"	27,000	Philadel.
30	" ..	M.Colza	1,270	"
	GRANGEMOUTH—			
28	J. Currie and Co. ..	Lub.	2,080	Hamburg
28	" ..	L.Paste	1,060	"
	LEITH—			
28	G. Gibson and Co. ..	Lub.	360	Antwerp
28	W. Graham-Yooll and Co. ..	Lamp	4,360	Hamburg
28	J. Cormack and Co. ..	Lub.	2,400	Riga
30	J. Currie and Co. ..	"	245	Hamburg
	Deduct to Correct—		4,038,065	
Aug.	LONDON—			
24	Shell Transport Co. (Pectan)	Fuel	988,000	Port Arthur, Tex.
	MANCHESTER—			
24	Consolid. Pet. Co. (Suram)	Illum.	525	Batoum
	LIMERICK—			
22	Consolid. Pet. Co. (Suram)	Lamp	207,975	"
	Total for the Week ..		2,841,565	
	FOR THE WEEK ENDING SEPTEMBER 10TH, 1906—			
Sept.	LONDON—			
4	Humphrey and Co. ..	Lub.	8,050	New York
4	Anglo-American Oil Co. ..	"	35,760	"
4	" ..	Lub.Gr.	2,000	"
4	Union Lighterage Co. ..	M.Lub.	7,020	Philadel.
4	" ..	M.L.Gr.	80	"
4	London Oil Shipping Co. ..	Lub.	1,660	Hamburg
5	G. and H. Green ..	"	3,330	New York
6	Asiatic Petroleum Co. (Spondilus)	Benzine	638,600	Pulo Samboe
6	" ..	"	43,400	"

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== QUALITY TELLS. ==

To Dealers only.

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Sept.				
6	General Petroleum Co. (Rocklight)	Gas	472,000	Constantza
6			580,000	"
6	G. W. Sheldon and Co.	M.Lub.	320	Antwerp
7	A. Brown and Co.	Lub.	2,000	Hamburg
8	J. Barber and Co.	L.Gr.	1,100	"
10	Scott's Wharf	M.Lub.	4,000	New York
10	G. W. Sheldon and Co.	"	203	"
10	Fielder, Hickman and Co.	Lub.	29,920	"
LIVERPOOL—				
4	Meade-King, Robinson & Co.	M.Lub.	3,000	Philadel.
4	Liverpool Ropery Co.	Lub.	225	Boston
4	Dee Oil Co.	M.Lub.	240	Antwerp
6	A. Hopps and Sons	"	7,140	Philadel.
6	W. B. Dick and Co.	Lub.	4,670	"
6	Meade-King, Robinson & Co.	M.Lub.	18,000	"
6	Worthington and Boler	"	10,000	"
7	W. B. Dick and Co.	Lub.	1,030	"
7	Cr��w, Levick and Co.	M.Lub.	23,680	"
7	"	Resid.	4,740	"
7	"	M.Colza	4,500	"
7	Bowring Petroleum Co.	Lub.	600	"
7	A. Hopps and Sons	M.Lub.	2,660	Baltimore
7	Meade-King, Robinson & Co.	"	2,400	"
7	Anglo-American Oil Co. (Weehawken)	Lamp	295,000	Philadel.
7	G. B. Taylor	M.Lub.	20,000	New York
8	"	"	46,800	"
8	Vacuum Oil Co.	"	9,600	"
8	W. B. Dick and Co.	Lub.	21,030	"
8	Cunard Steamship Co.	M.Lub.	2,270	"
8	American Line	Lub.	1,490	Philadel.
10	Liverpool Storage Co.	"	3,600	New York
10	W. Gibson and Co.	Lamp	2,050	Boston
10	Meade-King, Robinson & Co.	Resid.	6,000	Trieste
10	Burnaby and Chantrell	M.L.Gr.	392	New York
BARROW—				
25/8	Asiatic Petroleum Co. (Cardium)	Spirit	34,510	Pulo Samboe
8	Anglo-American Oil Co. (Lucerna)	Illum.	1,203,423	Philadel.
BRISTOL—				
6	H. R. James and Sons	Lub.	3,800	New York
6	"	M.Colza	21,000	"
6	"	Lub.	4,600	"
6	W. Smith and Co.	"	32,920	"
6	"	Lamp	4,000	"
8	Pickford's, Ltd.	M.Lub.	250	Antwerp
GRIMSBY—				
31/8	J. Sutcliffe and Son	Lub.	360	"
7	"	"	1,840	"
HULL—				
31/8	Thos. Wilson, Sons and Co.	"	6,800	S.Petersburg
3	"	"	3,880	Antwerp
4	Anglo-American Oil Co.	M.Lub.	23,100	New York
4	Thos. Wilson, Sons and Co.	Lub.	2,000	Riga

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Sept.				
5	W. Gillyott and Co.	M.Lub.	2,400	New York
5	Thos. Wilson, Sons and Co.	Lub.	58,680	"
5	"	"	25,960	"
8	"	"	2,000	Riga
6	Meade-King, Robinson & Co.	C.Naph.	28,000	Rotterdam
MANCHESTER—				
4	Geo. B. Taylor	M.Lub.	200	Hamburg
4	J. T. Fletcher and Co.	"	1,400	Antwerp
6	Meade-King, Robinson & Co. (Daghestan)	"	237,500	Batoum
6	"	"	3,000	"
10	Anglo-American Oil Co. (Weehawken)	Lamp	720,000	Philadel.
MIDDLESBRO—				
6	E. Harris and Co.	M.Lub.	3,000	Antwerp
NEWCASTLE—				
3	Tyne-Tees S.S. Co.	"	1,000	"
4	"	Lub.	400	Ghent
SWANSEA—				
5	Burgess and Co.	M.Lub.	2,000	New York
5	"	M.Colza	1,040	"
ABERDEEN—				
5	J. Cook and Son	M.Lub.	1,000	Riga
DUNDEE—				
6	D. Alexander and Sons	Lamp	200	Hamburg
6	"	M.Lub.	400	"
GLASGOW—				
3	Anchor Line	"	63,710	New York
3	"	Illum.	8,200	"
GRANGEMOUTH—				
3	J. Currie and Co.	Lub.	4,000	Hamburg
5	"	"	2,010	"
LEITH—				
1	W. Graham, Yooll and Co.	Lamp	4,360	"
1	J. Currie and Co.	Lub.	2,000	"
3	W. Graham-Yooll and Co.	Lamp	4,360	"
4	J. Cormack and Co.	M.Lub.	1,000	Riga
6	J. Currie and Co.	Lub.	2,010	Hamburg
8	W. Graham-Yooll and Co.	Lamp	4,360	"
BELFAST—				
5	J. C. Pinkerton and Co.	Lub.	160	"
CORK—				
10	J. Gough	"	170	"
DUBLIN—				
6	Alliance and Dublin Gas Co. (Kura)	Gas	362,500	Batoum
			5,210,063	
Deduct to correct—				
LIVERPOOL—				
21	Anglo-Am. Oil Co. (Genesee)	Gas	18,980	
Total for Week			5,191,083	
Total for the past Fortnight			8,032,648	

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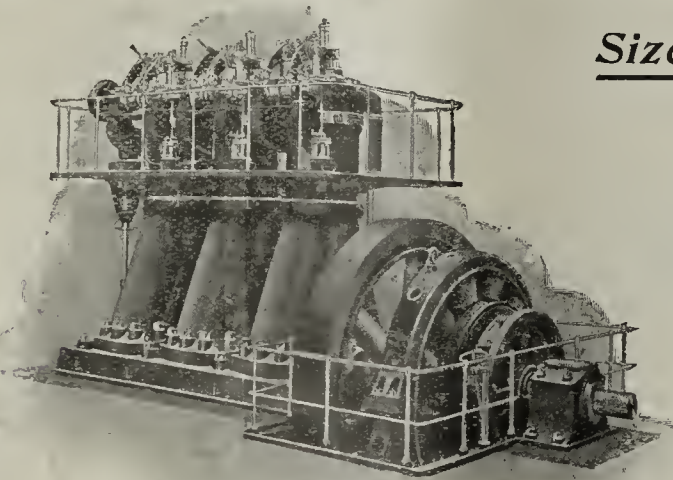
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

SEPTEMBER 29TH, 1906.

No. 382.

Editorial Notes.

**Death's
Destroying
Hand.** The hand of death has been busy in the ranks of the petroleum industry since our last issue, as evidenced by our columns this week. The removal from the ranks of commercial men of Mr. Daniel O'Day takes from the American petroleum industry one of its pioneers. To detail his career is to record the great progress that has been witnessed in the transportation of American oil by pipe line, and in this respect the article which we publish will be perused with mournful interest. His is the first death among the executive giants of the first rank who have made the Standard Oil Co. the greatest business organisation in the world. Mr. O'Day may well be classed with the six leaders, who include Mr. John D. Rockefeller, Mr. William Rockefeller, Mr. Henry M. Fagier, Mr. Henry H. Rogers, and Mr. John D. Archibald.

At home, we personally have to mourn the decease of Mr. Cameron, the general manager of Messrs. Livett, Frank and Son, a gentleman who was well known and very highly respected, and had a host of friends in the City of London.

**Progress
in
Roumania.** Remarkable progress continues to be made in Roumania, and when the whole of the figures are available it will be found that the July production exceeded that of a year ago by considerably over 20,000 tons. Free from labour troubles, and with a general desire among all concerned, from the Government downward, to foster and promote the interests, Roumania is steadily taking its place among the foremost oil-producing countries in the world. In this respect it is interesting to note that for some months past its petroleum production has even been exceeding that of Galicia, and consequently Roumania now occupies the fourth place among the producing countries in the world. We have frequently held that Roumania offers exceptional inducements for capitalists to assist in the development of the petroleum industry, and the marvel is that investors have for so long paid little or no attention to the claims of that country. A careful study of the prevailing conditions in Roumania must lead to the conclusion that the country has an outlook, so far as its petroleum industry is concerned, which is second to none of any in the world in its brightness.

**The Baku
Market.** With the general resumption of work on the various properties in the Russian oil field, the crisis which has overtaken the country's petroleum industry is by no means passed. Of late years there always seems to be such a "glorious" amount of uncertainty surrounding the welfare of the Caucasian petroleum trade, and, as

we remarked a few issues ago, one workers' strike is settled only to bring about another, and thus there is no knowing where oil field work will be totally interrupted by reason of the strained relations between the masters and workers. Even now such complications are not entirely improbable, since no permanent agreement has been arrived at between the employers and men, which would ensure continued working in the future. It is clear that the principal and most pressing question before the producers is to consider and remove the misunderstandings which have arisen by reason of the economic demands made by the men. An able handling of this question and a sincere desire to meet the just and acceptable demands of the workers would undoubtedly help to remove the principal obstacle to the smooth working of the petroleum industry. The employers have evidently now grasped the urgency of this question, and a series of conferences have been arranged to take place shortly at Baku, at which the principal topic of discussion will be the labour question. In the meantime it is very gratifying to find that matters at Baku are very quiet, and work is being pushed forward throughout the fields which for many weeks have been stagnant.

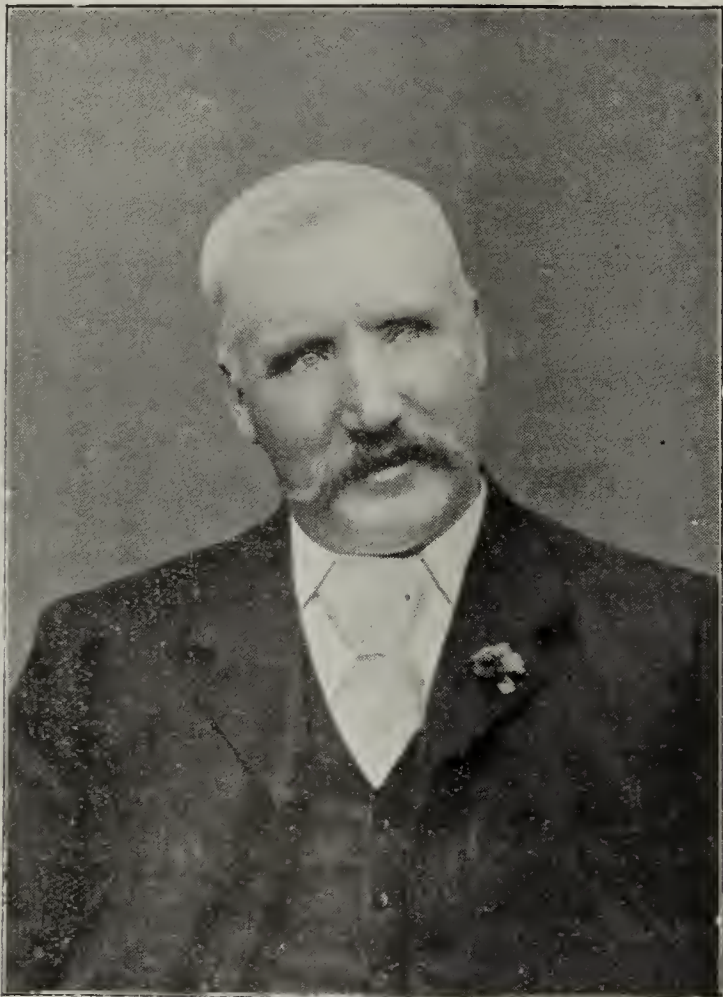
**Liquid Fuel
in Russia.** A conference which is to be held early next month at St. Petersburg, under the auspices of the Russian Ministry of Industry and Commerce is to deliberate upon the measures to be adopted with a view to assure a sufficient supply of liquid fuel and coal to Russian industries in the future. The Minister of Industry and Commerce will preside over the conference, which will be attended by representatives of various Government departments, petroleum producers, manufacturers, Volga shipowners, and colliery owners of the Donetz and Dombrovo districts. The situation with which the conference will have to deal has been brought about by the reduced output of crude oil at Baku, which has increased the price of liquid fuel enormously. The solution of this difficulty by substituting coal for oil fuel is hardly feasible, as the coal industry has been largely affected by the same troubles which have caused the decline in the output of crude oil, *i.e.*, riots and strikes.

**The
American
Fields
in
August.** The American fields during August were very active, the month being a memorable one in oil-field exploitation and operation. From the point of new production, the amount has never been equalled, the total output in this direction reaching about 50,000 barrels per day, of which over four-fifths came from the newly-discovered territory of Illinois. Here activity was very pronounced during the month, despite the cuts which prices have had to suffer, but in the Mid-Continent fields there seemed a disposition to halt ere new work was commenced. Possibly the reduced prices for the production may have had the effect of slowing the progress of the drill in new localities, but if this is so, the decrease in activity in

these fields has been very insignificant. In fact, production has now reached such a limit that the position is becoming serious, for while consumption is limited, as also are the means for caring for the production in the newer fields, the wells are proving most prolific. Thus it appears that nothing but an organised effort to stop drilling for a little time can remedy the situation with which the operators are now faced. In the Pennsylvania fields matters were not so satisfactory, and the same remark also applies to the Gulf coast regions of Texas and Louisiana, but when the decreases in these territories registered during the month are placed alongside the enormous gains made in the Illinois and Mid-Continent fields, the net increase in the total production is plainly seen.

DEATH OF MR. W. CAMERON.

It is with the deepest regret that we have to record the death of Mr. W. Cameron, the general manager of Messrs. Livett Frank and Son, the well-known oil merchants, refiners, etc., of Borough High Street, London, S.E., Tidal Basin, E., and Southampton. Mr. Cameron occupied the responsible position at Messrs. Livett Frank and Son for upwards of fifteen years, during which time he became associated with many members of the petroleum trade, gaining among them an enviable name for his geniality. Mr. Cameron's



duties also brought him in close touch with the leading importers into this country, and here, too, his kindly disposition and practical knowledge of things appertaining to the oil and paint trades, will be sadly missed.

We are certain the sympathy of the members of the industry will be extended to Mrs. Cameron and the family, two of whose members are in Borneo in the employ of Messrs. M. Samuel and Co. The funeral takes place this afternoon at Chingford Mount Cemetery.

LONDON OIL SHARE MARKET.

FRIDAY, SEPTEMBER 28TH.

Movements in the Oil Share Group on the London Stock Exchange have been of a somewhat irregular character during the past fortnight, but, taken as a whole, the tendency is towards a higher range of value.

On Monday week Shell Transport Preference were a wider price at $9\frac{1}{2}$ -10; but the first real change from these figures occurred on Tuesday, when Californian Refineries rose $\frac{3}{16}$ to $1\frac{5}{16}$ - $1\frac{1}{8}$, while on Wednesday Schibaieff issues were in request, the Ordinary Shares gaining 1s. at 8s.-9s., and the Preference $\frac{1}{4}$ at $2\frac{1}{2}$ -3. No further alterations took place till the following Monday, when Californian Oilfields weakened, closing quotation being $\frac{1}{4}$ lower at $5\frac{1}{2}$ -6, and Schibaieff Ordinary lost 6d. at 7s. 6d. to 8s. 6d. On the other hand, Russian Ordinary jumped 1s. 6d. per share, closing strong at 11s.-12s. With Tuesday's dealings Schibaieff Ordinary recovered the 6d. previously lost and remained firm at 8s.-9s. The only alteration since has been a further decline in Californian Oilfields to $5\frac{1}{4}$ - $5\frac{3}{4}$, and $\frac{3}{4}$ in the Shell Transport Preference, this latter alteration being due to the deduction of the dividend, shares now being quoted at ex-div., at $9\frac{1}{4}$ - $9\frac{3}{4}$.

The end-September account commenced on Tuesday last, when Contango rates were rather stiffer, those charged for Oil Shares being from 6 per cent. to 8 per cent. A comparison of "making-up" prices shews some little irregularity from those fixed at the previous settlement. Schibaieff Ordinary rose 1s. per share at 8s. 6d., Preference at $\frac{1}{16}$ at $2\frac{3}{4}$, Russian Ordinary 9d. at $\frac{9}{16}$, and Preference 1/- at $\frac{5}{8}$; on the other hand, Baku Ordinary fell 3d. at $2/6$, Preference 9d. at $4/6$, and Californian Oil Fields $\frac{5}{16}$ at $5\frac{5}{8}$, while Anglo-Russian Ordinary at $1/6$, Spies at $\frac{3}{8}$, and Shell Transport Ordinary at $1\frac{1}{2}$ shew no change.

To-day's latest quotations are given on page 176.

MR. LESLIE URQUHART'S RETREAT FROM BAKU.

Mr. Leslie Urquhart, the British Vice-Consul at Baku, but more generally known from his being the manager of a number of the English oil companies operating there, has made a somewhat ignominious retreat from the centre of the Caucasian petroleum industry. The feeling of the populace against him had become so great, that a military force had to be requisitioned in order that he might leave the place in safety. It is understood that Mr. Urquhart will not attempt to return.

AMERICAN PATENTS GRANTED.

Self-Measuring Oil Pump.—John B. Davis, Dayton, Ohio.

A pair of pump cylinders and their pistons and piston rods, racks connected to said piston rods, a pinion engaging said racks, a housing partially surrounding said pinion and having an interior screw-threaded socket, a plug within said socket adapted to lock and unlock said pinions, means insertible in said socket to engage said plug, to engage or disengage the same with or from said pinion, a cylindrical casing having a slight opening therein and mounted upon the superstructure, a cylindrical price scale within said casing with means projecting therefrom on the exterior of the casing for setting said price scale to the desired point, and a pointer movable to positions to indicate the prices of quantities of oil dispensed.

Apparatus for Pumping Oil Wells.—Miles W. Quick, Titusville, Pa.

In an apparatus the combination of a pump, a fluid-pressure motor for operating the pump, a valve controlling the flow of fluid pressure to the motor, means for opening the valve by a predetermined pressure of gas in the well and means for closing the valve by the movement of the pump consequent on the exhaustion of liquid in the well to close said valve.

The Death of Mr. Daniel O'Day.



A Pioneer of the American Petroleum Industry.

We regret to announce the decease of Mr. Daniel O'Day, one of the pioneers of the American petroleum industry, the sad event having taken place at Pontaillic-Royan, during a visit of Mr. O'Day to his daughter—Madame Ciriana.

The career of Mr. O'Day is wrapt up in the development of the American oil industry, for with this he was connected during the major portion of his life. Born in Ireland 62 years ago, his parents left for America a year afterwards, and the life of young O'Day until he was sixteen was not essentially different from that of the average farm-bred boy inured to hard work, long hours of labour and very plain fare. His home life, however, was most attractive, made so by the wisdom and consideration of his parents, plain, thoughtful, Christian people, who encouraged him in the study of good books and fireside discussion upon topics of wisdom.

Arriving at manhood, Mr. O'Day interested himself in the petroleum industry of America about the time when the problem of handling oil freights was presented in its most serious aspect to practical minds, and here his experience gained in the freight yards of Buffalo proved most useful, and Mr. O'Day's connection with oil transportation, for the development of which he did so much, dates from that time—1865. Mr. O'Day was at first connected with the then leading firm of oil carriers in the country, and his duties consisted in the movement of cars in the oil region. The service was in a state of chaos when he took it over, then but a young man. All shippers appeared to want cars at the same time, with the result that the cars were either all full at one time and moving toward the seaboard, or they were all returning empty, and so there were long intervals when there would be no oil cars at one end of the line. To meet this condition of affairs, shippers were wont to seize cars and hold them until needed, preferring to pay demurrage on empties for the sake of having them at hand. This was the state of things when Mr. O'Day took the position in hand. He soon surmounted the difficulties and in a short time reduced the service to a system which commended itself to the shippers, and so in his hands the oil traffic became as tractable and moved with as little friction as the passenger trade. Resigning his position in connection with this transportation company, Mr. O'Day did not leave the oil region: he was simply promoted to a larger sphere of usefulness in which he continued to grow and expand with the business. From the very beginning his influence with the traffic was that of a master mind, and until his decease he was the active head of the pipe line transportation department of the Standard Oil Co.

The firm of Bostwick and Tilford, from a modest beginning, had assumed, about 1870, a leading position in the trade. Their business had grown to such an extent that the resident agent, Mr. Joseph Seep, could no longer retain a firm grasp on all its details. His instructions from the firm were to employ the best man he could find to look after the shipments. Mr. O'Day's fame as a traffic manager had by this time become region-wide, and Mr. Seep, acting under his instructions, secured Mr. O'Day's services on terms proposed by himself. The upward movement in Mr. O'Day's remarkable career may be said to date from this

engagement, which has continued to the present time.

Soon after his connection with the firm of Bostwick and Tilford, a movement having its origin with certain western refiners and trunk line officials and its object the reform of the entire system of oil transportation, which, as then conducted, had made life for the shipper and refiner anything but "one vast, sweet song," owing to the disastrous competition among refiners and to some extent the cupidity of the railroads seeking this class of freight, and the movement was crushed; yet within five years, in obedience to natural laws, the reforms advocated by the South Improvement Co. were successfully carried into effect substantially as proposed, under another name. Without modification and improvement in the system, to meet and keep pace with an ever increasing production of the crude article, the business could not have long survived. The refining element, being in close touch with the consumer, were first to

recognise the fact and to take steps for the preservation of their branch of the industry. The producer through his incessant activities, had produced two barrels of oil in 1874 where one had existed in 1871. To keep pace with the producer, the refiner saw the necessity of causing two or more lamps to burn where one burned before. Here was a problem that none but the initiated could appreciate, and none but the practical were qualified to deal with. The problem was one that would yield to nothing short of scientific treatment. The industry had by this time produced its doctors of commercial science, who applied the remedy and saved not only themselves but the entire trade in its various branches from commercial ruin pending and imminent in 1874. The most feasible plan to present itself to practical minds was

combination of capital and interest by which unity of action was secured, and through which economy of output and extension of market were assured.

It is felt that the growth of the oil business demanded cheaper and better facilities of transportation, pipe lines superseded railways, and the oil traffic was transferred by gradual process from the latter to the former. Mr. O'Day rose by natural selection to the control of the gathering lines in the field and later on the trunk lines, as rapidly as constructed under his personal supervision, passed to his control. The completion of an elaborate system of pipe lines between the wells and the refineries on the lakes and at the seaboard, freed the oil industry from the constantly tightening grasp of the railway power. This work, involving the expenditure, as it did, of enormous sums of money, far beyond the reach of private capital, was only possible by combinations of capital mutually attracted by a common interest made up of firms who had been competitors with one another. Among other changes brought about by the refiner's alliance was that in the method of purchasing oil in the field from the producers. A department was erected, of which Mr. Seep was made the head, which superseded the old methods of dealing with the producers; economies were introduced that under former systems would have been impossible.

Mr. O'Day's enormous capacity for work has been subjected to many tests, but none severer than that when called upon to assist in the diversion of the oil-carrying



THE LATE MR. DANIEL O'DAY.

trade from the Empire Transportation Co. to the Erie Railway, which was successfully accomplished against a determined opposition from sources whence aid was expected instead, but the purposes sought were accomplished. The Pennsylvania road, by reason of certain control exercised over the Empire Transportation Co., owners of the Green Line, with its cars and working forces specially equipped to handle the oil traffic, controlled shipment by rail. More or less friction at all times existed between that road and shippers because of its close control. The Erie at this time was controlled by Gould and Fisk. The road tapped the oil region and they were naturally anxious for a share of its freight; encouraged by shippers, who were fully alive to every movement which held out promises of advantage to themselves, the Erie decided to enter the field in competition with the Pennsylvania, unhampered by contracts. The necessary arrangements were accordingly made; not the least important, perhaps, was the service of a legal notice upon the Pennsylvania road for the abrogation of existing contracts. The Pennsylvania was not at all alarmed at the prospect of competition; rather, they were hilarious, and disposed to gloat over the prospectively large rates which they expected to exact when the Erie had failed in its attempt to provide tub tanks for crude oil and racks for barrel shipments, and additional rolling stock within the brief time allotted.

Mr. O'Day's first pipe line venture was in 1873, when the base for crude supplies shifted permanently from the valley of Oil Creek to the lower country. He built a line from Emlenton to the Clarion oil fields, which was subsequently extended to Oil City. It was originally known as the Emlenton Pipe Line. The first name being subsequently changed to the America Transfer Co., with headquarters at St. Petersburg and Oil City. A stiff bid was made for patronage, and the activity of the management in this direction at the outstart greatly assisted Mr. O'Day in concluding terms with his competitors for the oil they gathered at the wells, delivered to his order on board cars. The line was built not so much for profit making as to insure a constant supply of oil on equal terms with other buyers and shippers. It is safe to say, however, that no money was lost by the enterprise. Mr. O'Day was a prominent factor in the great consolidation of pipe lines which took place in 1877. He became a director in the United Pipe Lines and retained his position as manager of the America Transfer Co., which had, in the meantime, constructed lines in the Bradford field, with storage tanks and loading stations at Olean and Carrollton. When the America Transfer Co. was merged with the United Pipe Lines, he continued as general manager of the latter. The Bradford field was the wonder of the hour, surpassing in productive capacity all the wonderful fields which had preceded it. With an area greater than Venango, Clarion and Butler fields combined, it seemed, what was more strange, that every well was a producer; the number of blanks being exceedingly small. The daily increase was more rapid than was ever previously known, the production reached at its floodtide 100,000 barrels a day, and upwards. The task of caring for this production was committed to Mr. O'Day. He rose equal to the occasion. More field lines were laid in a given time than ever known before, and more storage tanks were built than the most optimistic ever dreamed of. It was here that the record was made of a tank and a third of a day, of 35,000 barrels capacity. The surplus from the wells filled these and called for more. Seaboard lines had been the theme of every dreamer's dream for fifteen years, but the first seaboard line was started from Bradford in 1879-80. Mr. O'Day constructed two six-inch trunk lines from Olean to New York City, the entire distance through New York State. These were the first lines to reach the seaboard, and the oil public, accustomed to wonderful things, could scarcely believe the evidence of its own eyes. The National Transit Co., now so prominently identified with the industry in all the fields of production, became about this time the gathering system of the New York and

other trunk lines. Mr. O'Day had been vice-president since 1888 of that company.

About 1884, Mr. O'Day's activities found a new outlet in the fuel gas business, then claiming for the first time general public attention. When he became convinced that it was a good thing, its safety and practicability demonstrated, he took it up with all the enthusiasm of his practical nature. He advocated the construction of an eight-inch line from the Kane district, in McKean county, to Buffalo, a distance of 87 miles, at a time when the longest known gas line was 25 miles, and this was then considered to be pretty close to the limit of gas transportation by the impetus of rock pressure. He was asked to reflect, and replied that he had got through with investigation and was ready to demonstrate. He was able to shew by his own fuel department, which supplied gas to his oil pumping stations, a gas portage of upwards of 100 miles by devious routes throughout the oil field, without any considerable diminution of line pressure. That settled the matter. The Buffalo line was built. It was a success.

The almost simultaneous appearance of oil in Washington, Pa., and Lima, Ohio, in 1885, gave added scope to his enterprise and emphasis to his administrative qualities. These widely separated sections, commanding attention at the same time, together with unusual activity in the smaller pools outlying the Butler, Clarion and Bradford fields, made abundant work for the general staff of the pipe line department, which had been considerably enlarged to meet emergencies that seemed to be "bobbing up" with more or less regularity in the most unexpected quarters. The developments at Washington and Lima owe their origin to the enterprise of gas prospectors, whose activity about this time knew no bounds. Oil was found in Washington in the well on the Gantz farm, drilled by the Citizen's Oil and Gas Co. in December, 1884, but no considerable attention was attracted to the field until the opening of the Dyer well, in January, 1886. The initial oil well in Lima was found by Ben Faurot, on his paper mill lot, in June, 1885: the objective being gas, the enterprise drew its inspiration from the successful gas wells at Findlay developed within the year. Developments at the outstart were slow, but gained rapidly as enough drilling was done to establish safe lines of operation. When the oil did come, it came with a rush, and the demands upon the pipe line were proportionately increased. Within five years from the opening of Ben Faurot's well, the developed area extended upward of 150 miles in a northeasterly direction from Auglaize county to the lake shore near Toledo. An eight-inch trunk line was laid to Chicago, over two hundred miles in length, and trunk lines were extended an equal distance eastward to Bear Creek, connecting with Colegrove and Olean, forming a continuous line from Chicago to New York.

The construction of pipe lines during the same period called into service by the developments south of the Ohio river, were conducted on the same elaborate scale. The gathering lines of the South-west Pennsylvania and Eureka Pipe Lines duplicate in mileage and trunk capacity all the lines north of the Ohio River outside the Bradford field, and it naturally follows that a tremendous expenditure not only of money but also of energy was necessary to plan, organise and construct systems of such gigantic proportions.

The period between the years 1886 and 1891 was probably the greatest in point of pipe line activity in the history of petroleum transportation, yet even this activity was at its highest when Mr. O'Day organised and became President of the North-western Ohio Natural Gas Co., which was formed with a capital of \$6,000,000.

It is unnecessary here to say more than that Mr. O'Day's energy has done a remarkable part of the necessary work in bringing about that perfect organisation which is noticeable in the pipe line transportation department of the Standard Oil Co. to-day, and by his decease a void will be created in the ranks of that great concern which it will, indeed, be difficult to fill.

Interesting Exhibits at the Engineering Exhibition at Olympia.

The exhibition of engineering appliances which is now being held at Olympia includes a number of exhibits of interest to those connected with the petroleum industry. The exhibition, it may be mentioned, is to remain open until October 17th, and during its progress the educational side of engineering is to be emphasised by the delivery of a series of lectures on diverse subjects. In all, the exhibitors number more than 150, the appliances being well displayed over the whole of the ground floor of the main building, electrical power being provided for shewing the machines in operation.

The well-known firm of Messrs. W. H. Willcox and Co., Ltd., of Southwark Street, London, S.E., have a large stand almost in the centre of the hall, which cannot fail to command the attention of every visitor, as shewing the remarkably up-to-date way in which this firm cater for the engineering and allied trades. A prominent feature of the stand is the variety of oils and engine greases they have on view. Many of the cylinder oils of varying grades are exhibited in large bottles arranged at either corner of the stand, while barrels of motor oil, cylinder oil and engine oil give the display a most business-like appearance. Large coils of the firm's popular wire-bound petroleum hose, as used by so many oil importing and distributing companies, are on view, while the semi-rotary pumps with which the name of Messrs. Willcox is so closely identified are also exhibited. Of engineering accessories, the firm has also a very comprehensive display.

The illustration which is here given is of the prominent stand of the United Flexible Metallic Tubing Co., Ltd., of 112, Queen Victoria Street, London, E.C. This display occupies a position immediately on the right of the main entrance to the building, and by reason of the skill brought to bear in its general arrangement, its attractiveness is such as to rivet the attention of the visitor. Huge arches of eight and ten-inch flexible metallic tubing run round each side of the stand, while in the centre is to be seen the show-case which the firm had at the Liège Universal Exposition last year, and which contains a most complete range of the various varieties of the firm's flexible tubing in the smaller diameters. The fact that the metallic tubing is now so widely used for purposes of pumping oil says much for its adaptability, but as shewing its usefulness in this direction a length of two-inch tubing is in view, into

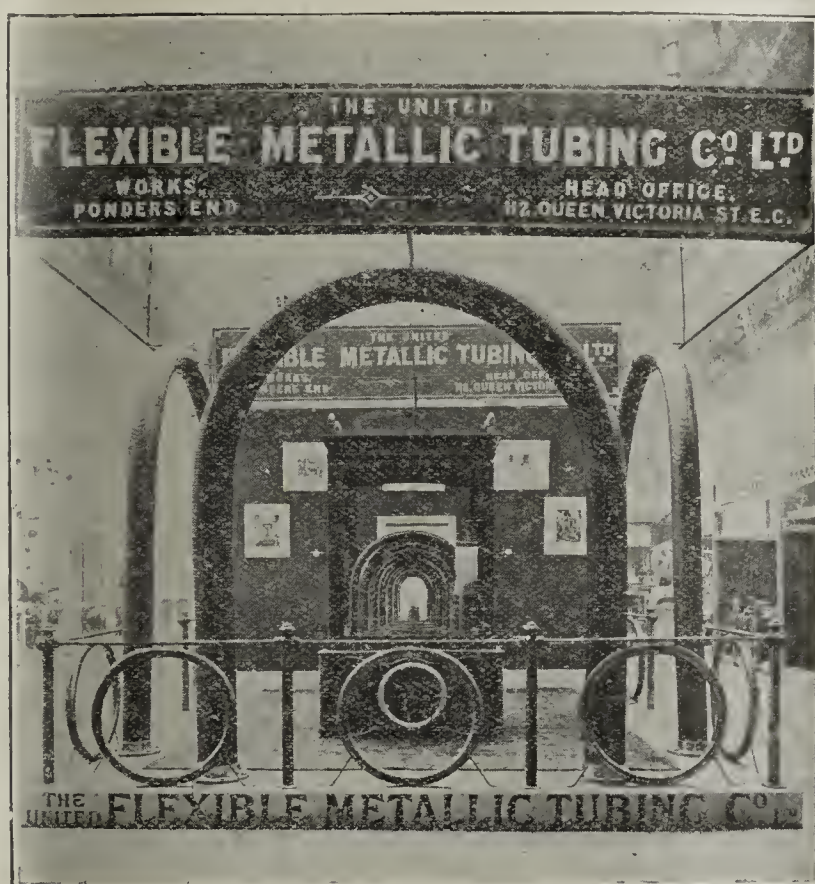
which petroleum was run over five years ago. The ends are closed, but the oil is still in the flexible tubing, which even after containing petroleum for so long a period, appears as good as ever. For the information of our readers, who possibly are not so well acquainted with the flexible tubing, we would mention that it is now made up to ten inches in diameter, and for pressures up to 2,000 lb. per square inch. It may be mentioned that a very large amount of this company's flexible tubing was used by the Liverpool Salvage Association in the recent unsuccessful salvage operations on H.M.S. Montague. Made of bronze, it is used by the Admiralty for charging torpedoes with compressed air, and for this purpose it has to withstand a test of 4,000 lb. per square inch. The variety of uses

to which flexible metallic tubing can be put increases and it seems to be equally applicable either for fluids, gases, liquids, or as a covering for electric wires.

The firm's flexible tubing is also exhibited on the stand of Messrs. Chas. Wicksteed and Co., of Kettering. This company shew several applications of the Wicksteed flexible shafting, which is now being used with much success for drilling, etc., working well in lengths up to 30 feet. The shafting in enclosed in-flexible metallic tubing of hexagonal shape which forms an oil bath wherein the

whole shaft revolves. Another interesting stand is that of Messrs. W. H. Allen, Son and Co., Ltd., Bedford, who are shewing, amongst other things, a three-crank three cylinder compound vertical enclosed high speed engine, fitted throughout with a forced system of lubrication, and suitable for dynamo driving in connection with electric lighting or the transmission of power.

A neat electrically driven three-throw pump is exhibited by the Excelsior Engineering Co., Ltd., the efficiency of this pump being greatly enhanced by the provision of the Gutermuth valves. Messrs. Alldays and Onions Pneumatic Engineering Co. shew a variety of appliances for foundry use, including oil as well as gas furnaces, while the Consolidated Pneumatic Tool Co. display their various hammers and rock drills operated by compressed air. On the stand of Messrs. W. H. Bailey and Co., of Salford, is an example of the Koster air compressor, and various descriptions of compressed air plant will be found at the stand of the Howard Pneumatic Engineering Co. The application of compressed air to the various branches of commerce has caused a really brave show to be made at the present exhibition, and the various exhibits in this respect are well worth a visit.



A NEW SAFETY PETROL LAMP.

There is on view at the Grocers' Exhibition at the Royal Agricultural Hall, Islington, this week a new lamp which deserves to command the greatest attention among all interested in the oil trade, for the simple reason that not only does it do away with any possible fear of danger which is frequently associated with the use of oil lamps, but it brings economy in light to what may be called a fine art. The lamp has been constructed to meet the demand which there undoubtedly is for a cheap lamp of high candle-power, which may be used with absolute safety.

The new "Petrolite" lamp—for such is its name—is the invention of Dr. Hugh Marshall, D.Sc., F.R.S., Lecturer in Chemistry of the University of Edinburgh, assisted by Mr. Alfred Jaray. The construction of the lamp is simplicity itself, consisting as it does of only four parts. As is suggested by the title, the fuel used is petrol, but this product is vaporised and entirely robbed of its danger. The principal upon which the lamp is constructed is decidedly original. The container consists of a highly absorbent and incombustible stone. This stone, which is perforated to allow for the passage of air, is placed in the container and filled with petrol, which the stone immediately absorbs. Thus there is no free liquid left in the lamp, and even if a match be dropped in, only a small light shews itself, and this is immediately put out by just placing the hand over the top of the container, thus robbing it of air. Once the petrol is poured into the container and absorbed, it is impossible to get it from the stone in liquid form.

The action of the lamp may briefly be described as follows:—The insertion of a lighted match in the opening of the burner gallery immediately causes a slight draught in the chimney, sufficient to produce a suction in the inner burner tube. The cold air thus drawn into the lamp has to make its way through the perforations of the stone saturated with petrol. During this passage the air is being carburetted with vapour, and this diluted gas while being drawn up the burner tube meets on its way with a further supply of cold air from the outside. Both are automatically mixed in the exact proportion to give a very hot Bunsen flame with perfect combustion.

Therefore it is seen that the evaporation of the petrol in the container is not produced by heat as is usually the case, but by causing a draught of cold air to pass through the petrolite container. In this way the burner produces a sufficiently hot Bunsen flame for the most brilliant incandescent light, while the temperature of the lamp body is lower than that of the surrounding air.

As has been shewn, the evaporation of the petrol by a draught of cold air is caused by the updraught of the chimney. As, however, this draught can only act in the upward direction, but never in the sideways or downward direction, the lamp, if overturned, immediately becomes extinguished. Similarly, there is no danger of fire even if the whole lamp is smashed to pieces.

The whole of the regulation is done with one single lever; therefore the exact position of perfect combustion is found immediately, and perfect combustion means the best light, and an impossibility of smell or smoke.

The "Petrolite" lamp has been subjected to the several tests, and has been awarded the "Keith" prize

of the Royal Society and a certificate of merit from the Institute of Hygiene. Its safety has furthermore been demonstrated to and attested by the British Fire Prevention Committee, while it has also been approved by the L.C.C. as an emergency light for places of public entertainment.

No wick is required, and consequently all trimming is obviated. The incandescent light given is very bright and powerful, and one very important advantage is that the cost is much lower than that of an ordinary oil lamp. A large number of the lamps in varying sizes may be seen at the showrooms of the company at 202, High Holborn, W.C.

MR. F. W. PARRY LEAVES THE HOMELIGHT OIL COMPANY, LTD.

The Homelight Oil Co., Ltd.—a concern which has made such wonderful progress throughout the kingdom since its inception a few years ago—is about to lose one of its most valued officers—we refer to the Assistant Manager and Secretary—Mr. F. W. Parry, who has resigned that position in order to take up the English agency of Messrs Macandrew, Forbes and Co., of New York. The news will be received with much regret in oil circles throughout the City, in which Mr. Parry is a well-known and highly-respected person, but it is some consolation to his many friends to learn that the change does not mean a severance from the commercial life of London.

Mr. Parry has grown with the petroleum trade in this country, and in no small way assisted in that remarkable development. Commencing his career with Messrs. Worthington and Boler, in Eastcheap, he eventually joined his friend—Mr. J. B. McClurg—in the Homelight Oil Co., having previously been associated with the Petroleum United Agencies, where he took charge of the sales department, while his connection with the petroleum trade has also seen him in the position of salesman for the heavy oil department of the Kerosene Co. We are sure Mr. Parry's many friends in the industry will wish him "God-speed" in his new sphere of activity.

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 27th September, 1906, as follows:—

Since our last report of 13th inst. the tin plate market (influenced by the undoubtedly strong position of raw materials) has gradually gained strength and prices have steadily advanced. A large amount of business has been transacted, and buyers are rushing in from all quarters to cover their requirements ahead. We make prices of oil sizes to-day as below, for delivery over the next few months, and it seems highly probable that prices will be further increased at the quarterly meeting of the trade at Birmingham, which takes place early next month.

1C	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	14/0 to 14/1 $\frac{1}{2}$ per box.
1C	19 $\frac{1}{4}$ × 14	120 "	110 "	14/0 to 14/1 $\frac{1}{2}$ "
1C	20 × 10	225 "	156 "	19/6 to 19/9 "

F.o.b. Wales. Tin lining and iron hooping extra.

KEROSENE AS A MOTOR FUEL.

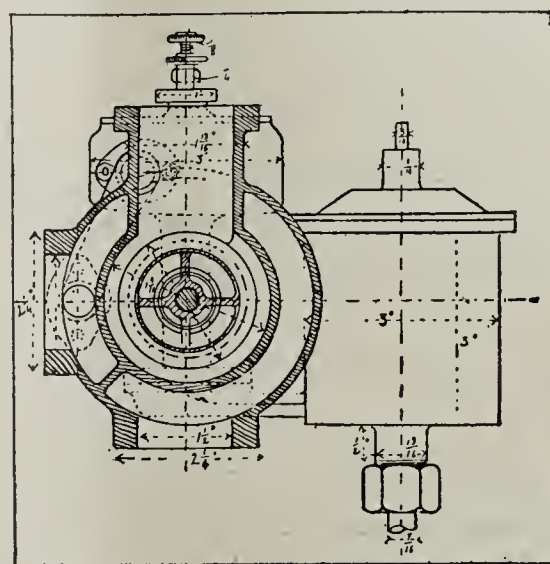
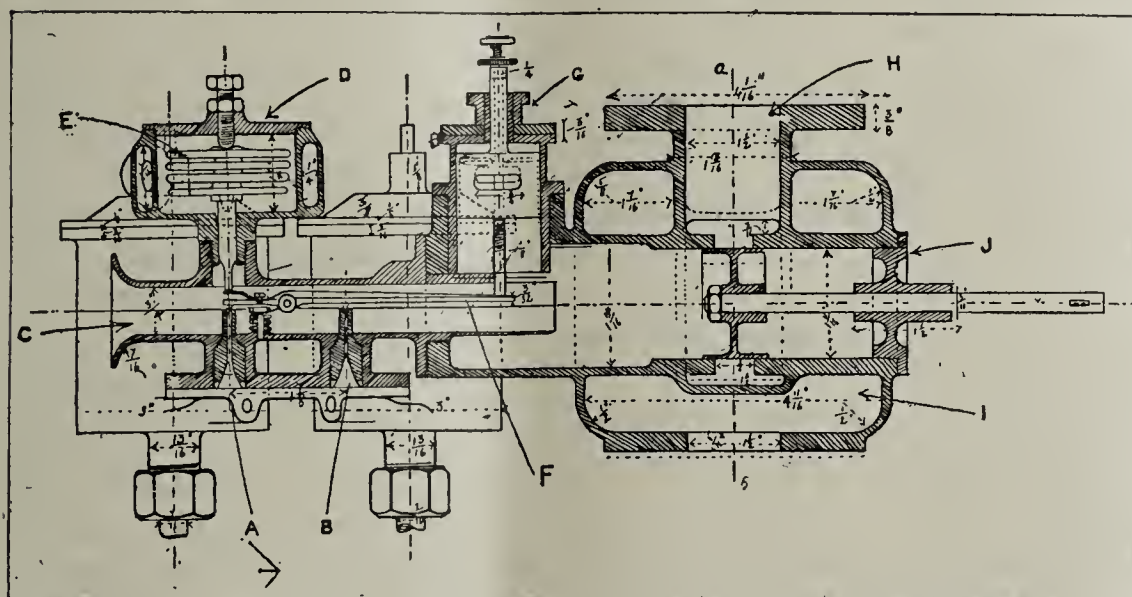
Interesting Details of the Dörwald Automatic Carburettor.

In the last issue of the REVIEW, upon page 157, we referred to the new carburettor invented by Mr. G. L. M. Dörwald, which makes the use of ordinary kerosene as a motor fuel quite practical, and as a result of the publicity gained through our columns we have received a number of enquiries from interested persons who are desirous of making themselves more acquainted with the merits of Mr. Dörwald's invention—popularly known as the paraffin carburettor.

Therefore we have communicated with Messrs. Geo. Neill and Co., engineers, of 38, Fenchurch Street, E.C., and now are in a position to supply a number of details, together with sectional diagrams, which will be of considerable interest in arriving at the main principles upon which this ingenious invention is based.

The construction of an effective paraffin carburettor

to supply the spirit necessary to start the engine. The arrangement for vaporising the kerosene is a simple one: the burnt gases, on leaving the cylinders, pass through the jacket (I) round the vaporising chamber, which consists of a bent tube leading into the introduction pipe. The heat of the gases passing through the jacket causes the chamber to become sufficiently hot to bring the kerosene up to the required vaporising temperature. At the point where the exhaust gases leave the vaporiser jacket, an auxiliary tube is led to what is known as the disc chamber (D), which is a cylindrical box similarly jacketed for the passage of the exhaust gases. The interior of this box contains an ingenious thermostat, consisting of two "ether capsules" (E), as they are termed by the makers. Each capsule is constructed of two thin corrugated copper discs; these are hollow



has been a proposition that has occupied the attention of inventive engineers for a number of years, and until the present invention was put to practical test it seemed very probable that the difficulties would have to remain unsurmounted.

The Dörwald carburettor, as shewn to enquirers, is fitted to the four-cylinder Aster engine which propels one of the Dennis motor omnibuses supplied to the Southend-on-Sea and District Motor Omnibus Co., Ltd, and has proved itself capable of providing properly vaporised charges of an explosive mixture made up of Russian kerosene and air. It is placed on the near side of the engine; tubes lead from the kerosene and petrol tanks, respectively, to two separate float chambers, and from thence to two jets opening into the spraying chamber, one end of which is open to the atmosphere. Inside this chamber is a fulcrummed lever (F), shewn in the sectional diagram, supported at a suitable point near one of its ends. On the under side of this lever are fixed two needle valves, which open or close the petrol and kerosene jets alternately, and at one end of the lever, on its upper face, rests the lower end of a spindle, controlling an extra air valve, which is, normally kept shut by a spring. Starting from cold the jet (B) admitting kerosene to the vaporiser is closed by its needle valve, whilst the petrol jet (A) remains open

and contain a small quantity of cotton wool saturated with ether. It will thus be seen that, as the vaporising tube is being heated by the exhaust gases, a portion of these gases is also performing the function of heating, by passing through the jacket of the disc chamber, the ether capsules contained in that chamber. The expansion causes upstanding pins on the capsules to press the fulcrum lever (F) down at one end, and by this action to close the petrol jet and open the kerosene one, at the same time raising the extra air valve which is provided for that purpose. Simultaneously, another small valve, operated also by the fulcrum lever, closes the inlet to the jacket of the disc chamber, in order to prevent the "ether capsules" from becoming overheated. This automatic throw-over from petrol to kerosene is extremely ingenious, and the change occurs, under normal working conditions, about five to six minutes after starting up the engine. It is stated by the makers that in a recent test run one quart of petrol was sufficient to start the engine and run it until the automatic change to ordinary kerosene was brought about. Thus the economy of the new carburettor will be apparent to all.

In addition, however, to the economy in fuel, the inventor claims that there is a considerable economy effected with regard to lubricants, said to be due to the

fact that the heavy oil used leaves a certain oleaginous deposit on the cylinder walls. The drawing here reproduced give a very clear idea of the carburettor, although several minor additions have been made to the mechanism during the experimental stages. Four "ether capsules" are here shewn in the disc chamber; but it has been found that two are ample for the work. Another feature, which does not appear in the illustration, is the automatic valve closing the inlet to the disc chamber jacket, while another fitting, also recently added, is an arrangement for mechanically depressing the fulcrummed lever, in order to close the paraffin jet and open the petrol one, in case of any emergency. This arrangement is operated from the dashboard, and is especially useful in cases where the engine has been standing for some considerable time, and the carburettor has cooled down to a temperature insufficient to vaporise the paraffin, the disc chamber remaining sufficiently warm to keep the ether capsules distended, and thus close the petrol jet at a moment when properly it should be open.

The patent rights are owned by the Motor Carburettor Syndicate, Ltd., and the sole selling agents are Messrs. George Neill and Co., of 38, Fenchurch Street, E.C. We hope in the near future to again refer to the subject after we have had the opportunity of testing the merits of the new carburettor in a practical manner, but for the present it is only fair to say that it is giving satisfaction when in use.

AMERICAN PARAFFIN WAX EXPORTS.

The exports of paraffin wax from America during July, as compared with the figures (in pounds) for the corresponding period of last year were as follows:—

Exported to—	1906.	1905.
United Kingdom	5,242,397	5,524,390
Belgium	11,673	67,271
France	77,977	24,842
Germany	576,140	256,934
Italy	472,904	717,671
Netherlands	527,596	366,125
Other European Countries ..	491,867	453,702
British North America	395	300
Central America and British Honduras	69,988	107,180
Mexico	556,306	175,658
West Indies and Bermuda ..	1,400	—
Brazil	10,239	17,157
Chili	—	—
Other South American Countries	34,056	24,606
Japan	1,213,393	1,146,753
British Australasia	1,074,731	250,044
Other Asia and Oceanica	617,247	402,754
British Africa	23,771	146,660
Other African Countries	—	—
Totals, pounds	11,002,080	9,682,053

DETAILS OF BAKU PRODUCTION AND BORING IN JUNE, 1906.

The following are the official detailed figures of the production of crude oil at the Baku oil fields in June, as published in the latest issue of the *Neftiannoie Dielo*:—

	Number of Wells in Exploitation.	PRODUCTION (in poods).				Average per Well per Day.
		By Baling.	By Spouters.	Casual.	Total.	
Balakhany	595	5,913,083	—	126	5,913,209	348
Saboontchi	547	14,031,720	88,500	253,617	14,373,837	939
Ramany	174	7,546,570	127,700	41,280	7,715,550	1,589
Bebe-Aibat	186	10,454,582	—	2,400	10,456,982	2,303
Total in June, 1906	1,502	37,945,955	216,200	297,423	38,459,578	922
Total in May, 1906	1,475	41,336,058	352,640	387,816	42,076,514	966
Total in June, 1905	1,523	44,750,273	1,228,000	336,864	46,315,137	1,051

The total production by spouters in June was obtained by Nobel Bros., namely, from well No. 369, on plot No. 51c at Saboontchi, 88,500 poods; and wells Nos. 140 and 400 at Ramany, 127,700 poods.

THE YIELD OF MANY GALICIAN WELLS.

Boryslaw.

The well of the Trzebinia Co., on the Kreisberg plot, is still yielding from 80 to 90 tons of oil daily. The adjoining "Szczesc Boze" well has settled down to a steady production of over 20 tons daily. The Bianka well of Messrs. A. Fauck and Co. is also yielding 20 tons daily. The Bertha well, which is situated in the direction of Mraznica, has for a considerable time past been producing over 10 tons daily. The "Ural" well yields 30 to 40 tons. The "Moritz" well of Messrs. Mermelstein and Co. now yields 30 tons daily. The Galicia Co. has completed its well No. 6, on the Bleichenberg tract, near the Klaudyusz well, and struck oil at a depth of 1,111 metres, which is in the third oil horizon. The daily yield is about 30 tons. The same company has recently obtained in the well No. IX., on the land of the Greek Orthodox Parish, from a depth of 990 metres, a yield of 100 to 120 tons daily.

Tustanowice.

The "Smolka" well of Messrs. Mikucki, Löwenheck, Schläfrig and Co., for about two months has been producing 20 tons daily from a depth of 670 metres. The Barbara well of Count Zamoyski and Co. is shewing strong gases and abundant traces of oil. The depth is now about 900 metres deep. Messrs. Mikucki, Glinski and Co. are getting from their well on the Glinski plot, from a depth of 1,050 metres, 20 tons of oil daily. Well No. 1, on the "Trunkwalter" property, produces 20 to 30 tons daily, from a depth of about 920 metres. The Agata well of Messrs. O. Schreier and N. Schander, which exhausted the first oil stratum at 820 metres, has been deepened to 900 metres, is now again producing 40 tons daily. Well No. 2, on the Triumph property, which has, from the first oil horizon at 920 metres, produced altogether some 25,000 tons of oil; now after being deepened to over 982 metres, flows again, yielding 80 to 100 tons of crude oil daily. The fact is of the greatest importance, proving the prolific nature of the second oil horizon at Tustanowice.

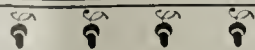
Special importance is attached in petroleum circles to the strike of oil by the Galizische Karpathen Co., in a well drilled at a spot called "na Dabrowie," situated to the south-east of Tustanowice. The well yields 70 tons of crude oil daily. This establishes the petroliferous value of a hitherto unexplored tract of land.

The general production of the Boryslaw-Tustanowice fields, which during the last few months was on the decline, is again looking up this month, and for September is expected to amount to 50,000 tons, of which 30,000 tons are at Boryslaw and 20,000 tons at Tustanowice.

THE PETROLEUM DEPOSITS OF PERSIA.



By PROF. H. HOEFFER.



The petroliferous region of Kend-i-Schirin, in Southern Persia, is situated quite close to the western frontier of Persia, under $34^{\circ}56'$ northern latitude. Between Hamadan and the alluvial plain of Mesopotamia there is a series of parallel mountain ranges which run from north east to south-west, and gradually fall away towards Mesopotamia. Between Kara-Ahengeran and Kara-Dag, in the valley west of Sohab, in an anticlinal valley, are to be found the oil springs near the village of Kend-i-Schirin, immediately on the Perso-Turkish frontier. They are placed in tertiary formations. All the strata contain salt. Kerkuk, in Turkish Mesopotamia, with its oil wells, represents the north-western end of this oil line, the opposite end being in the vicinity of Shah-Kuh. The Kend-i-Schirin wells, which are situated at an elevation of 480 metres above sea level, lie almost in the middle of this oil line. The country round the oil springs is nearly flat. The oil appears at a spot where the river Tchàm-i-Tchiasorkh cuts through the anticlinal right down to the oil-bearing marl, which is revealed at this cutting only. The oil is of a green colour, very fluid, and has a strong smell.

According to statements made by the natives of this district, petroleum has been produced for a very long time, which is confirmed by the many abandoned pits. The Kurds dig pits of about eight metres deep. The oil mixed with salt water is obtained in these pits, from which the oil is collected every four or five days. Each time about 250 litres is obtained, together with a large quantity of salt water, from which salt, smelling of petroleum, is produced. The crude oil is carried on mules to Kasr-i-Shirin, where it is sold at 4 francs per 30 batmans; when refined the price of the oil is doubled. The oil field is 180 metres from Bagdad, and the product appears to be rich in benzine and illuminants.

In 1901, a concession was acquired in the Kasr-i-Shirin district by Mr. D'Arcy, but his operations do not seem to have been successful. In 1905 it was announced that the English company, which took over the D'Arcy-Todd South Persian concession while drilling wells in the neighbourhood of Kermanshah, had struck enormous quantities of natural gas. Considerable quantities of oil were also obtained at depths from 61 to 91 metres. Another well drilled in 1905 to a depth of 1,000 metres proved a failure, and the company transferred their attention to the petroleum occurrence on the Persian Gulf.

The Shuster District.

About a day's march north of Disful, on the caravan route to Khoramabad, is a small valley called Kir Ab (which means sulphur springs), where there is a petroleum spring which has been exploited from ancient times. This is the oil field which Kennet Loftus visited in 1855 and pronounced the richest in Persia. He describes this oil deposit as being situated near the Baktyari Mountains between the old Mesjid-i-Suleiman Temple and the Asmari Mountain. These deposits,

which contain also sulphur, which is sold at Disful, are situated in a wild and sterile region. One of the springs yield a yellow oil, and all the other springs yield a black bitumen mixed with a light crude oil. Some of the springs are very prolific. The springs join together into a brook, across which a dam has been built. Upon reaching the top of the dam the water is allowed to flow through, whilst the bitumen is kept back, and by the heat of the sun is turned into a thick mass. The latter is put into a large covered still, and heated with a slow fire for a short time. When the bitumen has cooled it is ready for sale. The Seyds (descendants of Mahomed) have the privilege of exploiting this bitumen. About 1850, from 19 to 21 tons of oil and bitumen were collected yearly.

Between Shuster and Ram-Hormuz are oil deposits in tertiary formations and deposits of salt and sulphur, and between the Kurdon and Romuz rivers there are two mud volcanoes. In this district there are white and black oil springs. The former are 245 kilometres distant from Shuster. The oil is found in a thin sand layer between blue clays. In very shallow pits the oil collects on the surface of the water, about 34 gallons in each well daily. The oil is of a light straw colour, fluorescent, has a specific gravity of 0.773, has no unpleasant odour, although it contains sulphur compounds.

Near the village of Chadin, about 26 kilometres from Ram-Hormuz, the three principal oil springs yield daily about 25 gallons of oil; in the same place there are also deposits of solid bitumen from 70 to 75 centimetres thick.

The oil springs of Haf-Sheid are about 5 kilometres from Imanzad (Persian Convent), and 115 kilometres from Shuster. The oil oozes up from a layer of light yellow clay, which is rich in sulphur and gypsum. The three most important springs yield daily about 20 gallons (others put it at 40 gallons) of a green coloured oil of a specific gravity of 0.927, which is collected by a religious sect. The oil is used for rubbing in camels, and also as a remedy against skin diseases. The oil is of a dark green colour, and will yield 27 per cent. illuminating oil and 45 per cent. lubricating oil.

One of the oil deposits in this district is also described by General Schindler. This is situated 60 kilometres south-east of Shuster, under $31^{\circ}38'$ northern latitude. The oil, which flows out of three small wells, is very white and clear, and can be burnt in lamps without previous distillation. The daily output under the most favourable conditions is about 325 kilogrammes, whilst often it is only a fifth of that quantity or even less. The oil sells at 1 to $1\frac{1}{4}$ kran per one man (10d. to 1s. per $3\frac{1}{4}$ kilogrammes). The annual rental paid by the concessionaire for the right of exploiting these wells is about £150. The wells are situated on a hill 910 feet above sea level.

At 16 kilometres south-east of the town of Ram-Hormuz, there is also a thick oil with a slight admixture of water flowing out of limestone rock. Immediately

upon reaching the surface the oil hardens, and is used in small quantities for varnishing wooden articles.

About 80 kilometres from the port of Bushire, at a place called Daliki, there is a hot sulphur spring, in the vicinity of which some explorations have been carried out by the Persian Bank Mining Rights Corporation. The water of the spring comes up at a temperature of 35° C., and on its surface there are very numerous large drops of oil. The water is collected by the natives in flat basins, and the oil skimmed off. It is clear and yellow, has a sweet odour; specific gravity, 0.810; and burns with a bright flame without smoke. The yield of oil from this spring is from 80 to 100 litres daily.

The boreholes drilled in this locality have failed to yield any practical results, although traces of oil were encountered at a depth of 187 feet. The unfavourable climatic conditions and difficulties of transport are likely to discourage further attempts at exploitation.

The island of Kishim is situated on the southern end of the Persian Gulf. Oil is found in the western part of the island, between Salakh and Namagdan, in a small valley, surrounded by limestone and gypsum hills. A limestone reef, 50 to 60 metres wide, traverses this valley. Warm sulphur springs flow out of this rock, which also bring up drops of oil. The oil, which is free of sulphur, burns with a smoky flame, and has a specific gravity of 0.920 to 0.940. The yield, which is three to four gallons daily, is said to have been larger before the great earthquake in the Persian Gulf. The Persian Bank Mining Rights Corporation has also drilled a borehole in this locality without any practical results.

On the mainland, opposite the island of Kishim, on the coast near Latitun, there is also a small petroleum occurrence. The geological conditions are the same as on Kishim Island. The oil contains a little sulphur.

Opposite the eastern end of the island of Kishim, on the mainland, is the provincial capital of Bender Abbas. Near the village of Chamä-Wallab, 140 kilometres from the coast, there are sulphur springs which, according to the statements made by natives, are also bringing up traces of oil. Six kilometres from these springs, H. Winklehner found a spring which smelt strongly of sulphuretted hydrogen, numerous oil drops appearing on the surface. The oil is of yellow colour, with an aromatic odour, and burns with a bright flame. At times the oil disappears entirely, particularly in the rainy season, whilst it comes up more abundantly in the summer. During an earthquake the oil is said to have flowed here in large quantities.

Petroleum outcrops are also reported to the west of the last-named locality, near Amadi, in the district of Madale Chan; from one to two gallons is obtained there daily.

With regard to the deposits in Central and Northern Persia, Gasteiger Khan mentions the existence of a petroleum deposit near Hamadan on the Elwend Mountains. According to A. F. Stahl, the occurrence of a light petroleum is known near Shiraz. On the road from Shiraz to Darab there is the Dara Mountain, on which a black oil flows from a rock, is collected,

hardens, and is called mumiah. It is used for medicinal purposes, and is valued very highly. Beybahan and Hormuz, in Southern Persia, are also mentioned as places where mumiah is found, and several hills in Ghilan and Laristan shew similar outcrops.

A. F. Stahl found another oil spring to the south-east of the town of Semnan in the Kevir (salt desert), near the road from Teheran to Meshed. The oil is found in the bed of an old salt river behind a hill, where there are cold sulphur springs. A well sunk to a depth of 6 metres produced together with salt water from 40 to 50 gallons of oil daily. The oil is dark brown in colour, but shews greenish in a bright light, and has a specific gravity of 0.911. The distillate has an unpleasant smell. It seems to be fairly rich in paraffin since the cracks in the ground through which the oil issues are lined with ozokerite veins.

To the north of Semnan, in the mountains near the village of Diktash, oil is oozing out of dried up river beds. Milgunoff mentions the existence of an oil occurrence near Shah-Kuh-i-Baloe, which is 47 kilometres from Sharud, to the south-west of Astrabad.

A. F. Stahl further speaks of an oil occurrence on the southern shore of the Caspian Sea near Lengerud, whilst rather doubtful oil occurrences are mentioned as existing between Serab and Ardabil on north-western Persia. At the Vienna Exhibition in 1873 several specimens of mineral pitch were exhibited, which came from the neighbourhood of Send-Shan, which is situated on the Caspian Sea, north-west of Resht. This occurrence is possibly identic with the one near Ardabil and the one at Tolish-Dulab, near Enzeli, which is in the neighbourhood of Resht. This oil field was in exploitation up to the end of the eighteenth century, but during the war the wells were filled in and the field abandoned. This oil field is said to be eight kilometres long and 1.6 kilometres wide. Another oil field is said to exist at Shweri, near Enzeli, about 21 kilometres from the sea. In a well recently sunk to a depth of 19.2 metres a yield of 135 gallons of oil was obtained daily. In digging the well a clay tube filled with oil was found, which proved that oil was exploited there in former times. All these indications go to shew that between the Elbruz Mountains and the Caspian Sea there is an oil zone, the north Persian zone, extending from Ardabil to Shah-Kuh-i-Baloe, a length of about 600 kilometres.

SHIPMENTS OF PETROLEUM FROM ASTRAKHAN.

The following are the shipments of petroleum products from Astrakhan up the Volga from the beginning of navigation up to 1st August, 1906, compared to the corresponding period of 1905:—

				Seven Months, 1906.	Seven Months, 1905.
Residuals	..	..	..	88,660,876	149,349,958
Crude Oil	..	..	..	7,353,621	4,565,895
Kerosene	..	..	..	16,619,326	24,622,034
Lubricating Oils	..	..	..	2,577,875	3,291,008
Other Products	..	..	..	407,875	169,400
Total	..	..	..	115,619,573	181,998,295

THE BAKU OIL MARKET.

Elsewhere we publish the figures of the production of crude oil at the Baku oil fields in August, which was nearly 26,300,000 poods. This low figure is due to the fact that some of the largest firms, including Nobel, the Caspian and Black Sea Society, and the English companies have not until later been producing owing to the strike. On the other hand, the Moscow-Caucasian Co., Baku Naptha Co., Mantascheff and Co., and the Russfan Naptha Co. have been working very successfully. The small output of crude oil during the last two months (the July production having been only 21,600,000 poods), which are the busiest months for shipping oils to the interior *via* the Volga, have created serious difficulties in the oil trade.

The production of crude oil for the first eight months of 1906, compared to the corresponding periods in 1905 and 1904, was as under:—

				Poods.
Jan.—Sept. 1906	..	..	..	274,000,000
.. 1905	..	..	..	350,500,000
.. 1904	..	..	..	417,000,000

These figures clearly shew the disastrous effect which the incendiary fires and riots of last year and the intermittent strikes have had in the petroleum industry. During the 12 months from 1st September, 1905, to 1st September, 1906, the output of crude oil amounted to 333,800,000 poods, which works out an average of 30,000,000 poods per month, against the normal minimum monthly output of 50,000,000 poods.

The strike at Baku ended on the 1st of September (o.s.), when work was resumed by all the firms. The production in September will probably shew an increase if no further complications arise.

The Baku oil prices have not been affected by the resumption of work at the oil fields, and remain: Crude 32-32½ copecs, residuals 35-35½ copecs, and kerosene 40 copecs. The explanation is quite natural since there is no free oil on offer, whilst the exhaustion of stocks is making itself recently felt. Negotiations have been commenced for yearly contracts for the supply of crude oil at 25 copecs, but deals are difficult to conclude owing to the state of uncertainty and the risks involved in engagements made under present conditions. All idea of the normal value of oils has been entirely lost, since only a few months ago people never thought that prices could go up as high as they are now. Oil is bought only under the pressure of immediate necessity, whilst new conditions, quite unnecessary in ordinary times, are now being introduced in the delivery of the oils and mode of payment. The situation is so strained that any decline in price is quite out of the question.

The successful working of the oil fields during the winter will enable shipping operations to continue during the winter to Petrovsk, which ports will probably be utilised during the winter for making good the shortage of oil supplies in the interior.

The resumption of work at the oil fields has averted a serious crisis, and there is every hope that it will be possible to make both ends meet during the winter, but by spring the stocks in the interior will be completely exhausted and it will be necessary to find means to replenish them promptly.

The markets in the interior reflect the uncertain tone of the Baku market. At Astrakhan residuals are sold 39½—39¾ copecs, and at Saratoff at 43—44 copecs. The official quotation for kerosene at Czaritzin is 93 copecs per pood.

THE TANK FLEET ON THE VOLGA AND CASPIAN SEA.

The high price of liquid fuel is compelling all users to find means of economising it as much as possible. Only the most economical steamers and only the best barges which lose as little oil as possible are now used. The Volga shipowners have always been anxious to have the steamers and other vessels of the most modern types, and are spending large amounts of money to attain this end. In this respect the Volga fleet must be considered one of the best in the world. Lately the high prices of fuel have been causing great anxiety to the shipowners, and they began to look for a way out of the difficulty, with some measure of success.

Messrs. Nobel Bros. have already in use a number of iron barges with internal combustion engines of the Diesel system, brought into action by electric dynamos. The experiment proved rather costly, but was attended with great success. It is now intended to extend the system to the Caspian Sea, and it is proposed to build tank vessels for the Caspian Sea, of a capacity up to 3,500 tons, which is double the size of the largest of any steamer afloat on the Caspian Sea. Instead of steam engines, the vessel will be fitted with Diesel engines, which is calculated to yield a saving in fuel of from 50 per cent. to 75 per cent. Should this vessel prove to answer the purpose, the whole fleet on the Volga and Caspian Sea will be revolutionised, involving fresh enormous outlays of capital.

Along with the improvements in the steam fleet, the question of improving the fleet of tank barges and tank sailing vessels is also receiving increased attention. Comparatively recently, considerable objections were still raised against the building of iron vessels, but time has changed these views. The building of iron vessels has been greatly advanced by the rise in price of oil fuel, which compels people to be more careful in its handling, both as fuel and as cargo. It has been proved that the runs of steamers are more rapid and economic when towing iron barges than with wooden barges, there being a great saving in fuel, and the loss by leakage from the barges is reduced to a minimum.

At present, in Volga shipping circles, much interest centres round the building now in progress of an iron barge of unprecedented size. The length at the water-line is 490 feet and the width is 70 feet. The carrying capacity will be over 8,000 tons.

PETROLEUM SHIPMENTS FROM NOVOROSSISK.

The arrivals of petroleum products from Novorossisk during the first seven months of 1906 were as under:—

	From Baku.	From Grosny.	Total.
Kerosene ..	1,209,487	958,821	2,168,308
Crude Oil ..	97,547	862,324	959,871
Residuals ..	301,187	155,997	457,184
Benzine ..	—	68,950	68,950
Ligroin ..	—	155,043	155,043
Total ..	1,608,221	2,201,135	3,809,356
Total 7 months, 1905 ..	7,224,278	3,043,692	10,267,970

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	11-13
Baku Russian Petroleum ..	£750,000 Ord.	£1	2/3-2/9
..	£650,000-5½% Pref.	£1	4/3-4/9
Bibi-Eybat Petroleum Co. ..	£250,000 Ord.	£1	7/6-8/6
Californian Oilfields ..	£550,000 Pref.	£1	5½-5½
European Petroleum ..	£550,000 Ord.	£1	1/6-2/6
..	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	82-85
..	£600,000 Ord.	£1	11/6-12/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	10/6-11/6
..	£575,000 Ord.	£1	2½-2½
Shell Transport & Trading ..	£2,000,000	£1	7/6-8/6
..	£1,000,000 Pref.	£10	30/0-31/0
Spies Petroleum Company ..	£312,500	10s.	9½-9½xd 7/3-7/9

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on September 25th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	446	455
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,100	4,150
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	136½	138
cheff & Co.	250	—	—
Neft Co.	250	—	—
Nobel Bros.	5,000	8,250	8,440
.. ..	250	—	—
Rops and Co., V... ..	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading	250	—	—
Co.	250	—	—
.. .. (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8½ pd	£199,750	£10	19½
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Burmah Oil, Ord.	£1,100,000	£1	59s. 3d.
Do. Pref.	£250,000	£1	25s. 9d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8½
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	46s. od.
Do. New (£8 10s. pd.)	£131,750	£10	46s. od.
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	6½
.. (17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	12½
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	38s. od.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	73s. 9d.
Do. "B" Deb. ..	£150,000	£100	162½

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	65	80	1,000
Aurora .. (Deb. 5%)	92½	94½	—
Campina Poiana Mij. ..	18½	39	—
Dordtsche Petroleum Mij. (Pref.) ..	127½	121	500
.. (Deb. 4½%)	101½	102½	1,000
Elzasser Petroleum Mij. ..	2	1½	1,000
Gaboes ..	—	19½	—
Holl. Rumeensche Petroleum Mij. ..	34½	33½	1,000
Int. Rum. Pet. Mij. ..	100½	99	500
Java Petroleum Mij. (Ord.) ..	—	—	1,000
.. (Pref.) ..	—	38	—
Koninklyke Nederl. Pet. Mij. Shares	762½	752	250-1,000
.. Share certificates	761	756	1,000
Mœara Enim Petroleum Mij. ..	138½	137	100
.. 1-1,000 Oblig. 5	101½	101½	250-1,000
"Moesi Ilir" Petroleum Mij. ..	42	44½	—
Nederl.-Rumeensche Petroleum Mij.	—	17½	—
Nieuwe Ned. Petroleum Mij. And...	—	55½	1,000
Oliebronnen in Hannover Mij. ..	150	125	—
.. (Deb. 5%)	98	98½	—
Panolan Maatschappij Cert. ..	350	350	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	140	135½	1,000
.. (Common) ..	118½	115½	—
Sumatra-Palembang Petroleum Mij	80½	79½	50
Zuid Perlak Petrol. Mij. (Pref.) ..	98	98	—

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would occupy in the development of the oil industry in the Far East.

The Far East, at the time of which I speak, was supplied with its illuminating oil exclusively in tin cases chiefly from the United States, but to a small extent from Batoum, the export in the latter instance being carried out by the firm of Rothschild. It occurred, however, to Sir Marcus Samuel, who was dealing in a small way with oil in cases, to carry the oil in bulk to the Far East, but in carrying out these ideas he was met by four difficulties, any one of which were sufficient to frighten away any man with less energy and less far-seeing policy.

These difficulties were at that time as follows:—Messrs. M. Samuel & Co., although a very honourable firm carrying out trade with the Far East, chiefly in shells, from the small office in Houndsditch, were not blest with great finances, this being admitted by Sir Marcus Samuel some time ago, who acknowledged that this difficulty was surmounted owing to the ready assistance he received from Earl Grey, one of the leading shipbuilders who came forward and financed his first tank steamers. Another difficulty was that which was consequent upon small capital when engaging in a fight against such an enormous organisation as the Standard Oil Co., which was already established there, and also the reluctance of Messrs. Rothschild to supply the firm with oil in bulk—reluctance which can be easily understood seeing that that firm was engaged in carrying oil in cases to the Far East. How Sir Marcus Samuel was able to persuade them to enter into an agreement to supply him for ten years with all the necessary oil is a matter which I shall not go into, but, personally, I believe that at that time Messrs. Rothschild never dreamt of the success which would follow this venture of carrying oil in bulk to the Far East via the Suez Canal. It is now a matter of history that the chief success lay in the fact that Sir Marcus Samuel carried valuable goods in his vessels on their return journey, and this proved very profitable, as is shewn by the great success achieved in a few years. The last difficulty to overcome was the opposition raised and supported by the opinions of the then Home Office advisers—the late Sir Frederick Abel and Mr. Boverton Redwood—that the carriage of oil in bulk through the Suez Canal was dangerous.

The three-cornered struggle which was going on in the Far East at that time between the Standard Oil Co. on the one hand and the Rothschilds and Sir Marcus Samuel on the other, continued for a long time, and it was soon evident to Sir Marcus that if he meant to win, then it was absolutely necessary to secure financial and moral assistance from the firms with whom he traded. It was advisable for him to look round for other sources of supply outside Russia, and so he turned his attention to Borneo, where concessions that have turned out so prolific were acquired. To further the end in view a joint-stock company was formed with a capital of £2,000,000 sterling in ordinary shares, in which Sir Marcus and his brother had combined interests amounting to over 60 per cent., the co-operation of the leading firms in Bombay, Calcutta, Kurrachy, Colombo, Madras, etc., having been secured.

Thus the Shell Transport and Trading Co. was formed, and for the first four years of its existence it paid dividends upon its shares aggregating to 34 per cent. of the capital. Sir Marcus Samuel at that time had an interview with my representative, in which he said—as he had full right to say—“It would be almost insane for any company to start to oppose the Shell Co.,

seeing that unless organisation is widespread, any opposition must be crushed in the attempt. In fact, on this fact of organisation rests the cause of our success.”

Yet in 1901 we see the dividends suddenly dwindle to 2½ per cent., while from that date to this they have never been higher than 5 per cent., and now, the point is reached when the Shell Co. is forced to be merged into the Royal Dutch Co.

Naturally, my readers are anxious to know the cause of such a transformation, and this, in my opinion, is due to two factors. So long as the firm of M. Samuel and Co. had one aim in their mind, the distribution of Russian oil in the Far East, or partly the re-placing of this by the oils from the Borneo territory, such a policy was bound to bring very good results.

Unfortunately the system on which the success was built has been abandoned, and the importation of the various oils from the Borneo territories to Europe has been started, and this in its turn has led to another false step being taken—the provision of large storage installations throughout Europe—and thus the energy that was at one time focussed upon the distribution of oil in the Far East has been widely scattered in a variety of directions. The results which have followed this are shewn in the concluding paragraph of the circular just issued, for the European interest of the Shell Co. has now been disposed of altogether.

But there was one factor which even Sir Marcus Samuel could not foresee, and that was the remarkable rapidity of the development of the Royal Dutch Co., which was initiated in 1895 with a capital of £100,000, and under the able management of Mr. Detterding has grown to such an extent that its capital has had to be increased to £750,000, upon which in 1904 alone a gross profit of about £500,000 was earned. This company, the full particulars of which were given in the REVIEW of July 7th, is now one of the leading concerns in the Far East, and its position can be seen from the fact that such leading firms as the Rothschild's have recognised their standing, and joined them as partners for the distribution of oil in the Eastern markets, in which arrangement the “Shell” also participates.

The whole question is whether the shareholders of the Shell Co. will be the gainers by the new arrangement or not. Undoubtedly the fact that Sir Marcus Samuel himself has agreed to transfer his holding distinctly shews his view of the situation, and his opinion of the advantages the new arrangement will bring to the shareholders. I may here add that since the “Shell” began its career, Sir Marcus and also his brother have increased their interest in the concern as evidence of their belief in its future welfare. Thus the shareholders may rest contented that their interests in a concern such as the Royal Dutch Co. are safe, and that they are bound to be considerable gainers by the transformation which is about to take place.

Personally, and on behalf of many members of the petroleum industry, I am bound to say that we all regret that as a result of the new arrangement, the interest of Sir Marcus Samuel in the oil trade will, perhaps, to some extent lapse, but should this be so, we shall all look to him as one who has so ably represented the petroleum industry for the past 15 years. His name will always be associated with the carriage of oil in bulk to the Far East, with the employment of tank steamers for general cargoes, with the remarkable development of the Borneo oil fields, and the yeoman service he has rendered in the cause of liquid fuel, while last but not least his successful importation of benzine in bulk into this country, which has given so great an impetus to the motor-car industry.

P. DVORKOVITZ.

THE HISTORY OF THE BAKU STRIKE.

A CASE OF "TIT-FOR-TAT."

(By Our Own Correspondent.)

BAKU, 6/19th September, 1906.

Readers of the REVIEW are probably not aware that the strike which has just come to a close, and had a duration of exactly two months, was confined solely to a special group of petroleum producers, among whom figured the English companies, Oleum, Born, Schibaieff, and Bibi-Eybat Co., European Co., and Messrs. Nobels, and the Caspian and Black Sea Co. A few others were likewise affected, but the principal sufferers were the former group of producers known as the "Syndicate."

At first the strike was general, and the demands of the men were, for the most part, the same for all companies. The Shikhovo Co. were the first to give in—losing only one day—then shortly afterwards the bulk of the Armenian companies resumed work, and were followed by Mantascheff and Co. These companies continued to work, and then an effort was made on the plea of solidarity to cause them to shut down in order to bring the workmen of the other companies back to work, because it was known that the men on strike were receiving pecuniary assistance from their fellow-workmen, which procedure was beneficial to those companies which were working, but ruinous to those idle. The request for amalgamation fell through, and the Armenian companies went on working. This meeting of the petroleum producers was productive of one thing, namely, it revealed the true position of the Syndicate, and it proved to be a striking demonstration of tit-for-tat.

The cause of the failure for amalgamation is not far to seek, but I must refer your readers to the early months of last year, when owing to the unrest which prevailed then in Baku, the Armenian properties were practically at a standstill. It was then that the English companies, together with Nobel and Caspian and Black Sea Co. were approached by the Armenian producers with a view to obtaining the former's combined support to lodge a protest with the Governor-General, but to this the English and other companies refused, and continued working. It became apparent to the Armenian companies that they had not only to deal with the common rioters, preventing them from working, but also the members of their own industry would not combine for mutual protection. Of course, it was impossible for them to do anything, so they had just to submit, but, nevertheless, it made an everlasting impression upon them.

When a little over two months ago the workmen again put forth fresh demands, it was foreseen that the English companies, Nobel and the Caspian and Black Sea Co., would not submit to the men. The bulk of the other companies, grasping the position, settled or compromised with the men and started work, having lost only a few days through the affair.

In the meantime, the price of crude oil here at Baku, rose to 33 copecs per pood, which, taken for a period of

almost two months, has fully recompensed those companies which worked, and in addition they have had the double advantage of escaping all damage to their baling and other wells.

At first the attitude of the English companies towards the men was one of contempt, and continued until the meeting between the petroleum producers, when the hopelessness of any amalgamation was put on record. To accede to the men's demands after having withstood for over a month was impracticable, and to pay the men for the time on strike (which practice has always been in vogue) was an impossibility, so the only course open was to continue. Efforts had been made by pressure on the authorities to have the men ejected from the quarters which they occupied, and which are the property of the companies, but such a procedure was fraught with results which might prove too disastrous for the authorities to contemplate at the present moment, and was therefore abandoned.

The Governor-General then published an edict, pointing out that by law the men had no claim to be paid for the time on strike, and besides that a fine amounting to Rs. 3,000 would be imposed on any firm then on strike, that would pay the workmen for the time they were idle. The strike, nevertheless, continued. The Government were also losers in the game to the tune of about two-and-a-half millions of roubles per month, which is a rough estimate of the royalty received by the Government from the various properties not working, and consequently began to take steps towards bringing the strike to an end.

The measures adopted were the deportation from Baku of the leading men connected with the strike, and the threat to treat everyone likewise, if work was not resumed. Some of the companies resumed, but Oleum's men claimed to be paid money for quarters, pointing out that they had not been dismissed. A compromise, consisting of one month's pay, half of which is to be paid now and the other half at the end of the year, was agreed to. This the men claim to be half pay for the time on strike, but the administration chose to call it "gratuity."

It matters little whichever name may be chosen for the payment of this money, but the forcible steps which were taken in order to bring the strike towards an end, cannot possibly be good for the companies concerned, and for this reason, apart from all others, further trouble with the men is sure to occur.

Death of Mr. S. A. Oganisiantz.—In the latest issue of the *Nefiannoie Dielo* there is an announcement of the death at the hands of an assassin of Mr. S. A. Oganisiantz, the secretary and legal adviser to the council of the Baku Petroleum Association. Mr. Oganisiantz was apparently mistaken by the assassin for someone else, for he himself could have no enemies either in his private or public life.

THE "SHELL" TRANSPORT AND TRADING COMPANY, LIMITED.

Under date of September 21st, the Secretary of the Shell Transport and Trading Co., Ltd., has sent the following circular to the shareholders in the concern, reference to which is made in our leader columns:—

Dear Sir or Madam,—The attention of your directors has been called to various statements which have appeared in the public press—some of them somewhat misleading in regard to negotiations between the Royal Dutch Co. and this company. Rather than allow these statements to obtain currency your directors think it desirable to inform you of the nature of the negotiations which have been in progress although only a preliminary agreement has yet been concluded.

It is proposed to form a company or to adopt whatever other means may be found suitable to merge into one single interest the profits and losses as well as the assets and liabilities of the two companies. The two companies will each be represented on the management and retain its individuality as a participant in the results of this joint undertaking, the Royal Dutch Co. as to 60 per cent. and the Shell Co. as to 40 per cent.

In order to identify more completely the interests of the two companies it has been agreed that if a definitive agreement on these lines is finally ratified and accepted by both companies the Royal Dutch Co. should acquire shares in the Shell Co. to the amount of 25 per cent. of the ordinary share capital of the Shell Co. at a price of 30s. per share ex dividend for the year 1906, such sale being completed on the 1st January, 1907, and that they should hold these shares in perpetuity, or at all events should not part with them at any time except with the consent of the board of the Shell Co.

A further condition has been made that the Shell Co. should not divide more than 5 per cent. as dividend for the current year.

In order to ensure that the necessary number of shares may be forthcoming, Messrs. M. Samuel and Co. being satisfied that it is to the interest of the company, and therefore of themselves as large shareholders, that the amalgamation should be carried through, have consented to sell a sufficient number of their own shares to make up with the shares provided by the shareholders the number which the Royal Dutch Co. have contracted to purchase, and the directors, who are equally satisfied that the amalgamation on the lines proposed is most desirable, have accepted this offer, and have entered into a binding contract with Messrs. M. Samuel and Co. that they shall

sell so many shares as may be required at the price of 30s. on the same terms.

In order that every shareholder may have an opportunity, if he thinks fit, of participating in the proposed sale, I am instructed by the directors to inform you of the above proposed arrangement, and to request you to notify me on the enclosed form before the 31st October whether you elect to sell to the Royal Dutch Co. in the event of the definitive agreement being concluded 25 per cent. of your present holding in this company at the price mentioned.

If, as seems to the board probable, the number of shareholders who are willing to part with their shares is small, the board will be able to arrange to sell to the Royal Dutch Co. a larger proportion of your holding than 25 per cent., and should you desire to dispose of a larger quantity than 25 per cent. you are required to fill up the second paragraph on the enclosed form.

Should you express your decision in reply to this circular to dispose of any of your shares, and should the definitive agreement be made, a transfer will be sent you for execution, and you will be requested to return the same duly executed with the corresponding share certificate within fourteen days.

If no reply is received to this circular by the 31st October next, the board will assume that you do not desire to dispose of any of your shares and will proceed, should the proposed amalgamation be completed, to obtain the shares required for the Royal Dutch Co. in accordance with the arrangements they have made for that purpose.

No consideration will be payable to Messrs. M. Samuel and Co. for their guarantee to provide the said shares.

It is hoped that the details of the arrangement will be sufficiently determined to make it possible to put definite proposals before the shareholders of the two companies in time to bring the arrangement into effect by the 1st January next, but I am directed to draw your attention to the fact that no final arrangement is as yet concluded, and that any arrangement will of course be submitted to the shareholders in general meeting before adoption.

Your directors desire to take this opportunity of informing you that owing to the unsatisfactory nature of the trade in Europe, they have arranged to withdraw altogether from the European kerosene business, and that they have accordingly succeeded in disposing at par of the company's shares in the European distributing company.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO SEPTEMBER 24th, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Sept. 10.	From Jan. 1.	Since Sept. 10.	From Jan. 1.	Since Sept. 10.	From Jan. 1.	Since Sept. 10.	From Jan. 1.	Since Sept. 10.	From Jan. 1.	Since Sept. 10.	From Jan. 1.	Since Sept. 10.	From Jan. 1.	Since Sept. 10.	From Jan. 1.
Austria ...	—	876,640	4,000	370,890	—	77,930	—	—	—	—	—	—	—	—	4,000	1,336,460
Belgium ...	—	370	19,666	374,856	—	11,000	—	—	—	5,300	—	—	250	3,136	19,916	383,662
Canada ...	—	—	12,660	25,460	10,000	42,400	—	—	—	—	—	—	200	200	22,860	68,060
Dutch India ...	—	480	—	—	—	—	—	—	2,183,950	10,701,360	—	1,010	—	—	2,183,950	10,702,850
Germany ...	10,540	5,094,610	75,735	1,060,180	—	—	—	—	—	2,380	—	—	8,200	16,090	26,275	6,175,540
Holland ...	—	10,180	50	2,920	9,440	9,440	—	—	—	1,318,780	—	271,000	—	58,720	17,690	1,678,760
Roumania ...	—	4,449,755	—	—	—	—	—	2,087,880	—	1,024,580	—	—	—	—	—	7,562,215
Russia ...	543,000	26,352,870	9,520	3,942,160	—	—	1,760,880	3,727,630	1,160	6,210	—	—	—	5,660	2,314,560	34,034,530
U.S.A. ...	4,488,900	70,333,480	1,265,944	29,880,948	4,800	543,093	726,758	34,426,318	—	6,844,200	—	9,072,430	18,846	1,218,066	6,505,248	152,308,445
Other Countries	—	1,370	1,020	30,030	—	—	—	—	1,400	2,130	—	—	—	213,730	2,420	247,260
	5,042,440	107,119,755	1,388,595	35,687,464	24,240	683,863	2,487,638	40,241,828	2,186,510	19,904,400	—	9,344,440	27,496	1,515,602	11,156,919	214,497,781

MISCELLANEA.

PRODUCTION OF CRUDE OIL AT BAKU.

AUGUST STATISTICS.

The total production of crude oil at the Baku oil fields during August amounted to 26,276,000 poods, of which 7,020,000 poods were obtained from spouters. The production of the leading firms during the month was as under : —

	Poods.
Moscow-Caucasian Co.	2,000,000
Baku Naphtha Co.	1,700,000
Mantacheff and Co.	1,700,000
Mirzoeff Bros.	1,300,000
Russian Naphtha Co.	1,200,000
Pitoeff and Co.	1,100,000
Zoubaloff	1,100,000
Assadulaeff	1,100,000
Aramazd Co.	1,000,000
Nagieff	800,000.
Ter Akopoff Co.	600,000
Tumaeff and Co.	600,000
Shikhovo Co.	600,000
Kalantaroff	400,000
Tiflis Co. (Bebe-Aibat)	300,000
Schibaieff and Co.	200,000

THE LIGHTING OF OSTEND QUAY.

On Wednesday evening of last week the Ostend Quay was brilliantly illuminated for the first time by the new Kitson lamps which have just been installed. These lamps are arranged along the quay, commencing at the old railway terminus, and passengers are now landed in a blaze of light where formerly the illumination was exceedingly dim. For the first time the new turbine boat was able to dock her passengers at night without the aid of her searchlight. The new light is an immense improvement to the Quay.

BATOUM PETROLEUM EXPORTS.

DETAILS FOR JULY.

In consequence of the brisk shipments and restricted arrivals from Baku, the stocks of various petroleum products at Batoum have during July decreased by 25 to 28 per cent. The exports were much larger than in the preceding month. This was largely due to the re-starting of the Mantascheff case factory.

The following are the figures of the arrivals from Baku and shipments during July, and the stocks of various products on August 1st :—

	Arrivals. Poods.	Shipments. Poods.	Stocks on August 1st. Poods.
Refined Kerosene ..	2,160,000	2,737,000	1,473,000
Kerosene Distillate ..	—	—	57,000
Solar Oil ..	41,000	8,000	762,000
Machine Oil ..	625,000	713,000	386,000
Spindle Oil ..	98,000	40,000	97,000
Cylinder Oil ..	6,000	17,000	13,000
Vaseline Oil ..	—	20,000	36,000
Lub. Oil Distillate ..	—	5,000	17,000
Residuals ..	39,000	136,000	273,000
Total ..	2,969,000	3,676,000	3,114,000

The largest stock of kerosene on the 1st of August

was held by Messrs. Nobel Bros., namely, 487,000 poods, whilst the normal figure is about 1,500,000. The stocks of oil products shew a decline during the month, but the largest decline has occurred in the stocks of kerosene. About a quarter of the total kerosene shipments in July were directed to Alexandria to be packed there in cases. The shipments of case oil in July amounted to 634,000 poods, of which 153,000 poods were shipped to ports in the Persian Gulf. The shipments to ports in the United Kingdom amounted to 1,095,000 poods. The exports to France and Germany were rather small, namely, 389,000 poods and 165,000 poods respectively. There was a notable increase in shipments to Holland and Belgium, which totalled 823,000 poods. The increase in exports to these countries is due mainly to the development of the export of kerosene of the "Meteor" brand. To Turkey and the Balkan States there were shipped 461,000 poods of various oils. The July exports did not include any large bulk oil shipments nor any shipments to the Far East.

ARRIVALS OF OILS AT ASTRAKHAN IN JULY.

The arrivals of various petroleum products for the different firms at Astrakhan in July were as under :—

	Residuals.	Kerosene.	Other Products.	Total.
Nobel Bros. ..	11,095,795	1,140,317	663,195	12,889,307
Mazout Co. ..	5,703,439	306,602	450,995	6,461,036
Eastern Transport Co. ..	2,322,995	215,722	609,127	3,147,851
Lboff and Sons ..	2,167,433	405,729	246,445	2,819,607
Assadulaeff ..	1,095,732	—	—	1,095,732
Other firms ..	1,890,541	926,723	865,958	3,683,222
Total for July, 1906	24,275,845	2,995,100	2,825,810	30,096,755
" 1905	44,628,043	5,344,542	4,088,807	54,061,392

PETROLEUM IMPORTATION REGULATIONS IN JAMAICA.

The American Vice-Consul, Mr. W. H. Orrett, of Kingston, has furnished the *Oil, Paint and Drug Reporter* with a copy of the law recently passed by the colony of Jamaica for the regulation of the importation, storage and sale of petroleum. It is provided that the term "petroleum" shall include all natural mineral oils, whether refined or unrefined, all kerosene and paraffin oils, naphtha, petrol, gasoline, and all hydrocarbons, whether natural or manufactured, which give off inflammable vapour at a temperature at or lower than 145° F. Petroleum giving off inflammable vapour at a temperature lower than 95° F. shall not be imported, stored, or sold in vessels containing more than eight fluid ounces each, except in strong steel drums so constructed as to prevent leakage or escape of vapour. Penalties and forfeitures are prescribed for violation of the law. It is provided that every person selling petroleum shall first obtain a license.

THE PANAMA PIPE LINE.

COMPLETION OF THE WORK.

The pipe line across the Isthmus of Panama, which has been under construction for some months, has now been completed, this being reported from the main offices of the Union Oil Co. in San Francisco, and announced in the current issue of the *Oil, Paint and Drug Reporter*. The steel receiving tanks at Colon and Panama are near completion and the date set for first operation of the line is November 1st. The Union Steamship Co., subsidiary to the Union Oil Co., now has eight tank steamers, and will build ten or twelve more at once.

Fuel cost on the isthmus is promised a large reduction as soon as the oil is available there, and the Union Co. enjoys a contract with the United States Government to sell oil to the Canal Commission at a rate of 90 cents a barrel. This was part of the terms of the commission granted to the Union Oil Co. several months ago by the Panama Government and confirmed by Secretary Taft.

There are three taps to each mile of piping to facilitate the use of oil by the Canal Commission. It is expected that locomotives burning oil as fuel will be substituted for those in operation on the isthmus now as soon as the oil supply is constantly available. This oil will be taken from the California fields in tank steamers to Panama, pumped across the isthmus and into other tank steamers at Colon, thence being transported to the Atlantic seaboard.

CALIFORNIAN CRUDE OIL FOR JAPAN.

LARGE CONTRACTS.

Some weeks ago we referred in the REVIEW to the large contracts for Californian crude oil which had been placed by Japan. Consul-General Henry B. Miller, of Yokohama now reports as follows regarding this important commercial and industrial movement just entered upon, which especially concerns the Pacific coast. In his report he says:—

A contract has been signed between three of the leading oil companies of California, viz., Union Oil Co., Los Angeles; Associated Oil Co. of San Francisco, and Graciosa Oil Co. of California, and the Toyo Kisen Kaisha (Oriental Steamship Co.), of Japan, for the delivery of 500,000 barrels of crude oil per annum for ten years. It is understood that this oil is to be used as fuel for various Japanese steamers. It is further intimated that still greater oil transactions have been inaugurated by Mr. Henry Crocker, of California, in connection with prominent Japanese and with the Graciosa Oil Co. As a result, it is expected that three large refineries will be erected in Japan, one at Yokohama, one at Kobe, and another at Moji. The new tariff gives a 20 per cent. duty on crude oil, and a duty on refined oil of about 40 per cent. This difference in duty between the crude and refined oil, together with the market advantages for the by-products, makes a very comfortable working margin for the refineries located in Japan.

This very large transaction in California oil will necessitate the operation of a line of tank steamers between California and Japan; and it is understood that contracts have been arranged for the construction in Japan, and the operation under the Japanese flag, of five large tank steamers for carrying this crude oil to the Japanese refineries. This deal means a remarkable advantage to the California oil fields, but it will signify a great deal more to the Japanese merchant marine and for the industrial expansion of Japan. If the Japanese Government supports this new industrial development with the same national spirit that it gives to all other important enterprises it will result in the Government practically sustaining and assisting in the development of a great Japanese oil industry. The steamers for carrying this oil will be constructed under a Japanese subsidy, the industry will be further protected by a tariff, and no doubt further aid will be given in transportation of the products into the market of China if it shall become necessary.

THE NEW TRINIDAD LAKE ASPHALT COMPANY, LIMITED.

Sir William Robinson, G.C.M.G., presided at the ordinary general meeting of the above company held in London a few days ago. Before moving the adoption of the report he referred to the loss sustained by the board through the death of Mr. Robert K. MacBride, an original director of the company. He also referred to the death of Sir Robert G. W. Herbert, G.C.B., one of the trustees of the debenture holders, and mentioned that the debenture holders had filled the vacancy so created by the election as trustee of Mr. H. F. Previté, one of the directors, who was also associated in other directions with the Trinidad asphalt industry. In submitting the report and accounts the Chairman stated that the profit for the year after allowing for working expenses, depreciation, and the service of the debenture debt, amounted to £38,970 17s. 5d., which with the sum of £87,468 5s. 5d. brought forward, gave a total credit of £126,439 2s. 10d. After paying a dividend of 15 per cent., and writing off as loss on stocks and bonds of other companies £6,082 18s. 11d., a balance was carried forward of £45,356 3s. 11d. The shipments of asphalt from the Pitch Lake during the twelve months ending January 31st, 1905, amounted to 102,353 tons, shewing a decrease on the previous year of 7,104 tons. The shipments to Europe and South America shewed an increase, the reduction being in the shipments to the United States, due to extreme competition, which it was hoped would not continue. Since the date of the concession, February 1st, 1888, a total sum of £598,286 5s. 4d. had been paid to the Crown, which had gone to increase the revenue of the Colony of Trinidad. The business of the company continued to be satisfactory.

Mr. Charles H. Moore seconding, the adoption of the report was carried.

Sir Neville Lubbock, K.C.M.G., the retiring director, was re-elected.

THE PENNSYLVANIAN FIELDS IN AUGUST.

August proved to be a month of great activity in the fields producing Pennsylvanian oil, but the results were scarcely so satisfactory as might have been wished. Though more wells were completed than was the case in July, the new production revealed a decline. The territory for the most part was poor, and gusher strikes were few and far between. The activity was centred to a great extent in districts which, until touched by the drill, held out encouraging prospects, but the results of operations have been very disappointing to those who were hoping for extensions of the area of the territory producing high-grade oil. In the sections producing high-grade oil, which include the petroleum regions of Pennsylvania, New York, West Virginia and South-eastern Ohio, 767 wells were completed during the month of August; there were 135 dry holes and 64 gas wells, leaving 568 productive wells, with an average yield of 10 barrels. The new production amounted to 5,693 barrels. Compared with July there was a gain of 40 barrels completed and 23 dry holes, accompanied by a decrease of 523 barrels in the new production. New operations at the close of August were composed of 225 rigs and 506 wells drilling, which was a decline of 37 rigs and 13 wells drilling from the figures of July 31st.

South-eastern Ohio completed more wells than any other division of the field, except Venango-Clarion. The record for August was 114 wells, 64 dry holes and three gassers. Thirty-seven per cent. of the wells completed were unproductive of oil and the productive wells averaged a little over 17 barrels to the well. This is a higher average yield than has been known for some time, and is due to some good strikes in the Woodsfield and Rinares Mills districts. The latter district was credited with 10 wells, which averaged nearly 83 barrels each, while South-eastern Ohio completed 34 more wells in August than West Virginia, its total new production being 329 barrels less.

The August record in the Lima oil districts of North-western Ohio and Indiana shewed 261 wells completed, 3,273 barrels production, and 25 dry holes. Compared with July, this was a gain of three wells completed and a loss of three dry holes and 298 barrels production. During July, 258 wells were completed, the new production amounted to 3,571 barrels, and there was 28 dry holes. This was a decrease from the June figures of 52 wells completed, 222 barrels production, and three dry holes. The work of abandoning old wells that no longer furnish sufficient production to make it profitable to operate them continues. There were 225 wells abandoned in the Trenton Rock oil fields in August, 111 in July, 213 in June and 207 in May.

For August 31st, the count of new operations shewed 140 rigs and 245 wells drilling under way in these districts, which was a loss of five rigs and nine wells drilling from the figures of July 31st.

The wells completed during August in the Pennsylvania, Lima, Illinois, Kentucky, and Tennessee fields

are given in the following table published in our excellent contemporary, the *Oil City Derrick* :—

Field.	Completed.	Production.	Dry.
Pennsylvania	767	5,693	199
Buckeye	153	1,636	15
Indiana	108	1,637	10
Illinois	496	22,432	82
Kentucky	29	728	3
Total	1,553	32,116	309

Those wells which were being drilled at the close of the month were,—

Field.	Rigs.	Wells Drilling.	Total.
Pennsylvania	225	506	731
Buckeye	71	143	214
Indiana	69	102	171
Illinois	115	295	410
Kentucky	14	26	40
Total	494	1,072	1,566

AUGUST OPERATIONS IN THE GULF COAST OIL FIELDS.

There was much activity in the Texas and Louisiana fields during August, but the results were not very favourable. Consumption and production both suffered a considerable decline during the month, but another reduction in the stocks was likewise recorded. The increasing scarcity of the Texas product has caused several advances in the market, and directly opposite conditions prevail to those in the Mid-Continent oil fields. The estimated production of the Texas and Louisiana products for July and August, according to the *Oil Investors' Journal*, were as follows :—

	July.	August.
Humble, Texas	390,000	295,000
Batson	210,000	210,000
Saratoga	230,000	205,000
Sour Lake	200,000	180,000
Spindle Top	80,000	75,000
Dayton	6,000	6,000
Jennings, La.	614,000	695,000
Welsh	6,000	6,000
Total	1,736,000	1,672,000
Daily average	57,866	55,733

This represents a decline in the July average production of 2,133 barrels. The decline is confined entirely to the oil districts of South-eastern Texas. The shipments for August are given as 934,448 barrels of South-eastern Texas, and 1,028,037 barrels of Louisiana oil, making a total of 1,962,385 barrels, or 65,415 barrels a day. In addition, there was a refinery consumption of 600,000 and a field consumption of 60,000 barrels, making the total for August 2,622,485 barrels, or 87,416 barrels a day. There is a decrease from July of 11,157 barrels a day. The total consumption exceeded the runs or receipts by 31,683 barrels a day. While the Kansas stocks have been piling up at the rate of nearly 1,000,000 barrels a month, the Texas oil stocks have been declining in the same proportion. Consumers of Texas oil are looking to the cheap oils of Kansas to help to supply the demand for fuel oil, but capital is exceedingly wary in the matter of a pipe line from Kansas to the gulf, which is a prime necessity if the Mid-Continent oil field is to find an outlet for its surplus products to the southward.

THE ILLINOIS OIL FIELD

A GLUT IN PRODUCTION.

The oil producing territory in Illinois has proved to be so extensive, the new development has been so rapid, and the production so great that even the Ohio Oil Co. with its great facilities has found itself incapable of keeping pace with the production, and has had to take measures to bring about a temporary cessation of development, or at least to ask that operations in the field be pushed with less activity for a time. When one stops to consider the work that has been done by the Ohio Oil Co., and that now under construction, it seems almost marvellous. The survey for the double eight-inch pipe line from Martinsville to Montpelier, Ind., a distance of about 175 miles, was made, the right of way secured, the pipe bought and delivered, and in two months more the line will be completed. A tank farm was purchased north of Casey, and nine 35,000 barrels storage tanks were constructed. Several tanks of 35,000 barrels capacity have already been completed, and a force of about 300 men are at work building more. An eight-inch pipe has been laid to connect the Casey and Martinsville farms, and another to the Crawford and Lawrence county fields is well under way, the line having already been connected up as far as Stoy.

This, however, is only a part of the great work that has been done by the Ohio Oil Co. for the Illinois field, and, while it seems hardly possible that so much could be accomplished in so short a time, the work of development has been more wonderful.

Some six months ago the what is called tested territory covered less than 20,000 acres, and the daily output of oil was probably 2,000 barrels. To-day the territory extends some 70 miles north and south from three to fifteen miles in width, and already the daily production is estimated at about 50,000 barrels. Never before were there as many strong operators at work in a field as have been developing in the Illinois field during the past few months, outside the old regions of Pennsylvania. Slack operations in the Eastern fields caused a rush from there to the Illinois fields, and adverse legislation and unsettled conditions of many leases in the Mid-Continent caused a rush of operators from the middle-west to Illinois. An important point in favour of the field is that operations can be carried on so cheaply, and returns are so quick that operators of small means have been able to get a foothold and become large producers. These things have brought about a condition that requires the careful consideration of all parties interested—the land owner, the operators, and the purchasers of the oil, and there is now but one, the Ohio Oil Co. There now seems, says the *Oil City Derrick's* correspondent at Robinson, but one logical conclusion, and that is to do less development until such a time as there is a market for all the oil.

It is a very healthy outlook for the British Motor industry when enquiries continue to flow in from all parts of the globe to the British Empire Alliance on matters in connection with the supply of cars, heavy vehicles, and the thousand and one accessories which go with them.

AMERICAN NOTES

For Roumania.—Mr. Harry Rickards, a well-known man in the Gulf Coast oil industry since the early days of Spindle Top, has sailed from New York bound for Roumania, having permanently closed his Beaumont office.

The Illinois Field.—An interesting article upon the remarkable activity in the Illinois oil field, which has resulted in a glut of production, will be found upon another page in this issue. At present a conservative estimate of the field's yield is put at 50,000 barrels per day.

Pipe Line Extensions.—The Standard Co. is extending its Crawford to pipe lines from Lawrence county, Ill., and within the next three weeks it is expected that the eight-inch line from the Illinois field to Montpelier, Ind., will have been completed, this being of sufficient capacity to do away with the present glut in the field.

The Wilkins Company.—The Wilkins Co., we are given to understand, has transferred its holdings in the Jennings field for 50,000 barrels of oil to G. B. Zigler and Co. The property transferred consists of one acre, one producing well, and one well in the course of drilling. The producing well is the famous Wilkins No. 2, which already has made nearly 3,000,000 barrels of oil.

Bad Luck for Jennings.—Jennings appears to be experiencing a mixture of good and bad luck at the present time. During the latter half of August, three wells completed started off at the rate of 5,000, 4,000 and 3,000 barrels respectively. After a day or two, however, the whole lot went dead. Air is now to be applied in the hope of bringing at least some of the production back again.

Fire at Spindle Top.—On August 28th a fierce fire swept the busiest portion of the Keith-Ward tract of Spindle Top, on which are located some of the best producing wells in the Spindle Top district. The property destroyed was valued approximately at \$20,000. A number of derricks were burned, so that the production has suffered a set back for a little time. The work of rebuilding is, according to latest information, now in progress.

Oklahoma Oil Leases.—It is rumoured in the Mid-Continental fields that Secretary Hitchcock has recently had an audience with President Roosevelt, and that data is now being prepared relative to the oil leases in Oklahoma. It is the general supposition that the President is ready to settle all disputes, and desires to have all facts in readiness when the senatorial committee returns from Indian territory, and submits its recommendations to Congress.

The Gulf Coast Consumption.—According to the *Oil Investors' Journal*, the gross movement and consumption of oil in the Gulf Coast regions of Texas and Louisiana during August amounted to 2,622,485 barrels. These figures represent a decline of 433,321 barrels compared with those of July, when the movement and consumption was put at 3,055,806 barrels. The falling off of the production in the regions for August as compared with July is put down at 64,000 barrels.

The late Mr. Daniel O'Day.—We learn that deep sorrow has been expressed throughout Pittsburg at the decease of Mr. Daniel O'Day, to which event we refer upon other pages. Our own correspondent, writing at Pittsburg, says those associated with the National Transit Co., of which he was the General Manager, must keenly feel his loss. There are few of the heads of departments who have not at some time been the recipient of some kindness or favour extended through the generous impulses of his kindly nature.

Is It Another Canadian Field?—The current issue of the *London Free Press* publishes a communication from Fletcher, which states that half-way between that place and Chatham, a large oil strike has recently been made. The locality is on the Crow Farm, near Prairie Siding. The oil was found at a depth of slightly under 1,500 feet, and an important point in connection with it is that the gravity is well up to the average in the Pennsylvanian fields. A few days prior to bringing in the well, another came in a dry hole, and as a result land values, which had been rapidly rising since exploitation was commenced, began to drop. Now, however, a re-action has set in, and considerable interest is being taken in the strike, for the general expectation is that a wide petroliferous area will be encountered.

International Association of Boring Engineers.

THE TWENTIETH ANNUAL CONFERENCE.

This year's International Conference of Boring Engineers took place from September 9th to 12th in Nurnberg, Germany. The President, Prof. Oebbekke, of Munich, opened the conference with a speech in which he pointed out the importance of mineralogy and geology for the science of deep boring, and dwelt on his personal relations to the boring industry. Amongst other things he mentioned the news which had just come to hand of the discovery of petroleum on the Tegern Lake, at a depth of 500 metres, and another discovery of petroleum in considerable quantities in the neighbourhood of Au, at a depth of 430 metres.

Continuing his address Prof. Oebbekke urged the importance of the technical colleges concentrating their efforts to produce practical geologists, who would be able to solve any problems set before them at home and abroad, with the object of developing valuable minerals for the common good. The more closely theory and practice went hand in hand the more certain would success be. In conclusion, the President expressed the wish that the boring science might further thrive, and by disclosing fresh mineral treasures add to the welfare of Germany and the world as a whole.

Mr. Th. Tecklenburg, of Darmstadt, a past president, read a paper entitled, "The Utilisation of Non-successful Boreholes as Mineral Wells."

In this paper, the author dwelt at considerable length on the great advantages which would be derived from the utilisation of unsuccessful boreholes, for and amongst other things recommended their utilisation as mineral water wells, which in most cases could be done without any great expense or difficulty.

The next paper on the list was one by Dr. C. Ochsenius, of Marburg, entitled, "Common Boring Conditions of the Principal Boring Objects: Coal, Salts, Petroleum, Mineral Water and Iron Ore." This paper was omitted at the author's request, who sent a letter of excuse.

The third paper was by Mr. A. Fauck, senior of Marcinkowice, Galicia, entitled, "The Question of Water-Flush Boring in the Petroleum Producing Industry."

After a few introductory remarks the author mentioned that the Canadian and the cable systems of boring were not suitable for water-flush drilling, and that was the main reason for the opposition to water-flush drilling on the part of certain boring engineers who were interested in the above-mentioned systems. He would deal with the purely technical aspect of the question, which would be merely a repetition of what he had said many times before. He only wished to say that many oil well managers had after proper experience declared themselves in favour of water-flush drilling. The first to do so was Mr. Mesarocz, of Potok, who was the first to adopt the author's water-flush system, and had been using it for many years.

Mr. Fabianski, upon seeing that Mr. Mesarocz was getting rapidly large quantities of oil, likewise adopted

the water-flush system, and in the first well struck very large quantities of oil. These successes caused the representatives of the Canadian drilling system to rise up in arms against the water-flush system, and even demanded from the mining authorities the prohibition of the use of the water-flush system in Galicia. The fear of watering the wells was the reason why Fabianski later reverted to the Canadian system. The borings of the Actiengesellschaft fuer Naptha Industrie were drilled by him by the Canadian system, and their non-success was well known. The Royal Dutch Petroleum Co. had for years been drilling with great success by the water-flush system, under the direction of Mr. Hoorweg. The firms working in India with the Canadian and cable systems had been less successful, while, on the other hands, the excellent results obtained in Alsace were known to everyone.

The commission appointed by the Austrian Ministry of Agriculture for investigating the boring operations at the Galician oil fields had reported that there was no ground for the fears of the watering of the oil fields through the water-flush system.

The borings of the firm of Albert Fauck and Co. in Boryslaw had supplied ample proofs that the water-flush boring system was the surest method, since all the wells drilled by their "Express" system were completed, not only in the shortest time but with the largest finishing diameter, and this earned premiums. The fact that the majority of those wells were, for fear of watering the oil stratum, continued by the Canadian system, and in the end spoilt, was the best proof of the superiority of the water-flush system. Messrs. Fauck and Co.'s own well was successfully brought down to the second oil horizon at a depth of 1,050 metres with a diameter of 6 inches, and had been producing ever since.

The history of the origin of petroleum told them that water was no enemy of petroleum. According to the Engler-Hoeffler theory, the formation of the bulk of the oil took place under the water, and it was to the dwellers of the sea that petroleum owed its origin. Fire was the enemy of petroleum, since it was only by fire that petroleum could be destroyed, but, on the other hand, without that element petroleum would be valueless, since it was only with the aid of fire that petroleum could be used for illumination and motive power purposes. Petroleum could in no case be destroyed by water, whilst on the contrary, it was through water courses that petroleum came up to the surface. Water facilitated the appearance of oil, and also indicated the places where petroleum was to be found. By the proper use of water flush petroleum could be produced much more cheaply than otherwise. Even the Canadian and the cable systems had to use water for bringing up the debris, but they did that in a very imperfect manner.

They had to remember that petroleum originated under water, and often its formation was covered with sand and mud, and in course of time thicker deposits of sand

clay were formed on the top of it, which made the coming up of the oil to the surface impossible. Only when the drill was applied did the oil first come to the surface. That the water used with the water-flush system, under a very slight pressure should drive away the oil was entirely out of the question, as in the bowels of the earth there were no empty spaces which would receive the oil forced away by the water. When they saw at Boryslaw the oils thrown out of the wells from a depth of more than 1,000 metres, which required a gas pressure of at least 1,000 atmospheres, it was clear the fear of the watering of the Boryslaw oil field by the the water-flush drilling rested on very slender ground. In reality, after the investigations of many commissions, it had not been possible to prove that water-flush drilling had caused any damage anywhere. On the other hand, fire had not only destroyed much oil and other valuable property but had also caused the loss of many lives. The water-flush drilling system had thus proved superior, both in economy and safety from accidents, to other boring systems.

Mr. R. Sorge (of Berlin) reported the results of the labours of the commission appointed at last year's conference to decide on the question of water-flush drilling. He could only announce that during the past year the commission had not been able to meet, but he hoped that it would, nevertheless, be possible for the present conference to solve the vexed question of water-flush drilling.

Following up the investigations of the Mr. Ursinius, Mr. Sorge has made exhaustive experiments at the technical mining laboratory of the Deutsche Bank, which have demonstrated that under all pressures water penetrates into an oil sand with greater difficulty than into a dry sand free of oil. These results destroyed all arguments brought up against water-flush drilling, particularly those having reference to alleged watering of the strata.

This interesting statement by Mr. Sorge gave rise to a protracted discussion in which part was taken by Messrs. Fauck, Prof. Oebbekke, Dr. Theine Ursinius Stein and others. The great value of Mr. Sorge's investigations was unanimously recognised.

The following resolution was drafted and unanimously adopted, with a view to its being sent out to all Government institutions of all countries interested in the question:—

The Twentieth Conference of Boring Engineers meeting at Nurnberg, after listening to a report and discussion on the retention of water and oil in sands and porous strata, have come to the unanimous conclusion that the water-flush boring system can have no injurious effect either in recognising or producing oil. The discussion has, on the contrary, shewn the water-flush system is superior to the dry systems, inasmuch as it alone renders possible the proper shutting off of injurious strata which are not recognised in dry boring. The conference, therefore, requests the various Governments to remove the restriction existing. The conduct of negotiations and supplying of further information is entrusted to:—

For the German Empire—Dr. Sorge, of Berlin.

For Austria-Hungary—Mr. Albert Fauck, Sen., Vienna.

For Roumania—Mr. Mircea, of Bucarest.

The conference resolved that to the mining authorities in Germany, Austria-Hungary and Roumania that this resolution should be telegraphed.

(To be continued.)

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended 22nd September was 259,000 poods, or 4,175 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended 23rd September was 192,000 poods, or 3,096 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 16th September was 141,360 poods, or 2,280 tons; and for the week ended 23rd September was 128,865 poods, or 2,078 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 16th September was 58,338 or 941 tons; and for the week ended 23rd September was 106,155 poods, or 1,711 tons.

Telegraphic Address:—"OLEINE."

Telephone Nos.:— $\left\{ \begin{array}{l} 249 \text{ \& } 254 \text{ LIVERPOOL.} \\ 1990 \text{ MANCHESTER.} \end{array} \right.$

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The American Oil Market.

New York, Week ended Sept 15th.

The situation during the past week has not changed in any material respect, but the publication of the pipe line reports shews the situation, both field and statistical, to be more bearish than had been expected, due to the large and steadily increasing production in the State of Illinois, the statistics of which are now included in the monthly summary. The total production during the month of August, as shewn by pipe line runs, was over 3,438,000 barrels, shewing an increase of over 12,000 barrels, while the deliveries amounted to over 4,740,000 barrels, shewing an increase of over 443,000 barrels. There was an apparent decrease in stocks in possession of the pipe lines of 553,000 barrels, and the total is now stated as being 13,562,000 barrels. The production in Illinois is increasing steadily, and the development is being extended. As the average production of wells in that State is more than four times that of the wells in the older producing States, the producers are greatly encouraged in their search for oil, and it is expected the increase in production will continue. The pipe line to Indiana is nearly completed, and the deliveries will soon increase, thus giving further incentive to active field work, as the storage problem will then be relieved. The reports from the producing sections during the past week, says the *Oil, Paint and Drug Reporter*, shew about an average number of completions, with the results in the older fields about the same as heretofore, a few good wells, a liberal proportion of dry holes, and a preponderance of small pumpers. In Illinois a well showing less than 100 barrels initial production proves a sore disappointment to the drillers, while a gusher starting off at the rate of 1,000 barrels is by no means uncommon. Of course they are encountering dry holes and small pumpers, but the average production of the new wells is over 45 barrels per well, and the new production at the close of August was over 22,000 barrels per day. From the Mid-Continent fields the reports are not so satisfactory, though development work is going on steadily. In Texas and Louisiana the production is decreasing, and stocks have been drawn upon during the past month to the extent of upwards of 700,000 barrels. Prices have shewn further advance and are now quoted at 42@48c. for Batson, as to gravity; Humble, 53c.; Jennings, 42c.; Saratoga, 49@50c.; Sour Lake, 45@56c., as to gravity.

REFINED AND PRODUCTS.—The demand for refined for export has been active during the past week and it is apparent that the lower prices for export oil are having the effect of increasing the demand for American oil despite the active competition. The increased movement, however, is confined to United Kingdom and Continental markets, there being no improvement in the call from the Far East, where the oils from Sumatra and Borneo are in favour by reason of lower price and more advantageous freight rates, while the quality is nearer that of the American oil than is that of the European oils. The engagements during the past week have exceeded 300,000 barrels, all for shipment in bulk.

The price for barreled oil for export has remained steady at 7.50c. for New York loading, and at 7.45c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are steady at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel.

Cases for export have been in light request, and sales of about 50,000 are reported. The price of plain tops has been steady at 10c. Freight rates are firm.

Crude for export has been in light request, and sales of about 10,000 barrels are reported. Pennsylvania crude is quoted at 7.50c. in barrels.

CLOSING QUOTATIONS.

CRUDE.		Week ended	
		Sept. 8.	Sept. 15.
		1906.	1906.
National Tran, Certificates	per bbl.	\$1.58@1.59	\$1.58@1.59
Pennsylvania crude in bbls.	per gal.	7.60	7.60
Pennsylvania crude in bulk	.. ..	4.50	4.50
Residuum, bbls. for export	.. ..	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Sept. 15.	Sept. 15.
		1905.	1906.
Tiona .. ..	.. ..	1.42	1.68
Pennsylvania .. ..	.. ..	1.27	1.58
North Lima .. ..	.. ..	0.86	0.90
South Lima .. ..	.. ..	0.81	0.85
Indiana .. ..	.. ..	0.81	0.85
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.30	1.30

REFINED—FOR EXPORT.

		Week ended	
		Sept. 8.	Sept. 15.
Cargo Lots for export..	per gal. ..	7.50	7.50
In bulk .. ..	.. ..	4.40	4.40
Philadelphia loading ..	.. ..	7.45	7.45

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Sept. 8.	Sept. 15.
5,000 to 10,000 .. ..	.. ..	10.05	10.05
1,000 to 5,000 .. ..	.. ..	10.20	10.20

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Sept. 8.	Sept. 15.
120 fire test, S.W. ..	per gal. ..	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13	13
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	12½@13½	12½@13½

NAPHTHA AND GASOLENE.

		Week ended	
		Sept. 8.	Sept. 15.
Naphtha, crude, car lots, 68 @ 72 deg.		15.00	15.00
Gasolene 86 deg. .. ..	.. ..	23.00	23.00

PENNSYLVANIA OIL RUNS from Sept. 7th to Sept. 13th were:—Sept. 7th, 93,132; Sept. 8th and 9th, 184,321; Sept. 10th, 98,763; Sept. 11th, 126,346; Sept. 12th, 132,827; Sept. 13th, 111,833. For the month of August, 3,426,717.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—96,632; 193,482; 121,432; 133,867; 136,427; 118,122. For the month of August, 4,740,362.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended Sept. 14th and from Jan. 1st, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	321,500	8,300,500	8,558,500
Refined, cases	—	10,091,000	14,875,000
Crude, barrels and bulk ..	—	1,186,100	811,900
Crude, cases	—	285,000	164,000
Naphtha, barrels	—	255,000	429,100
Residuum, barrels	—	580,200	705,000
Lubricating, barrels	—	213,100	114,900
Total, barrels cde. eq. ..	505,555	17,382,125	18,782,363

CLEARANCES FOR THE WEEK.

During the week ended Sept. 14th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	12,885,240	324,251,794	359,247,007
Crude	—	232,900	924,344
Naphtha	113,300	13,412,574	10,700,133
Residuum	5,000	3,617,000	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Sept. 14th ..	17,180,320
Total from New York, from Jan. 1, 1906 ..	433,251,950
Same period last year	480,520,356
Decrease	47,268,396
From United States, week ended Sept. 14th ..	28,009,048
Total from United States, since Jan. 1, 1906 ..	843,509,897
Same period last year	888,926,003
Decrease	45,416,106

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The "Review" Shipping List.

SEPTEMBER 27, 1905.

The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE ..	La Pallice ..	Philadelphia	L. Aug. 12	GOLDMOUTH	Singapore ..	—	P. Anjer,
ALCHYMIST	Bilbao	Terneuse ..	Arr. Flushing,	GUT HEIL	Philadelphia	Bremerhaven	Aug. 28
AMERICAN	Antwerp	New York ..	Sept. 24	HAINAUT (Dch.shp.)	Antwerp	Smyrna	L. Sep. 22
APPALACHEE	San Francisco	Shanghai ..	Arr. Sep. 10	HARRY	Port Arthur	Cette	At Piræus,
APSCHERON	Genoa	Novorossisk	Arr. S. Francisco,	WADSWORTH	(Texas)	Sept. 19	P. Cape Henry,
ARAL	Copenhagen	Tyne	Sept. 8	HELIOS	Philadelphia	Rotterdam ..	Sept. 8
ARAS	Penarth	New York ..	Arr. Sept. 25	HOTHAM	Rouen	Middlesbro'	L. Sept. 25
ARGYLL	Port Harford	San Francisco	L. Sept. 25	NEWTON	Shanghai ..	San Francisco	Arr. Sept. 13
ASTRAKHAN	Philadelphia	Dover	P. Barry Island,	HOUSATONIC	—	—	Tr. on Lakes btr
AUGUST KORFF..	Philadelphia	Hamburg ..	Sept. 11	IMPERIAL	—	—	U.S. and Can.
AUREOLE	Stockholm ..	Tyne	L. Sept. 6	JOANNIS COUTZIS	Taganrog ..	Piræus	Arr. Sept. 18
AZOV	—	—	P. Del. Break,	J.B.AUG.KESSLER	Philadelphia	Calcutta	L. Sept. 11.
BAKU STANDARD	Ibrail	Rouen	Sept. 12	JAMES BRAND	Tyne	Philadelphia	P. Dunnet Hd.,
BALAKANI	London	Philadelphia	P. Scow,	KURA	Penarth	Kus tendje ..	Sept. 22
BATOUM	Port Arthur	Antwerp	Sept. 25	LA CAMPINE	Antwerp	Philadelphia	L. Sept. 17
BAYONNE	New York ..	Plymouth ..	Trading on W.C.	LA FLANDRE	Philadelphia	Ghent	Arr. Sept. 12
BEACON LIGHT ..	Venice	Batoum	of South Amca.	LA HESBAYE	Antwerp	New York ..	P. Del. Break,
BEME	Rangoon ..	Calcutta	Sept. 20	LA MADELEINE ..	St. Louis	Antwerp	Sept. 15
BLOOMFIELD	Philadelphia	Rotterdam ..	L. Sept. 26	LA VIGUESA	(Rhône)	Vigo	L. Sept. 24
BORJOM	Theodosia ..	Batoum	L. Sept. 15	LACKAWANNA	Philadelphia	Tyne	Arr. Sept. 19
BRILLIANT	New York ..	Göthenburg	L. Sept. 22	LE COQ	Philadelphia	Havre	Arr. Sep. 15
BROADMAYNE	Tyne	Port Arthur	L. Sept. 25	LOUTSCH	Messina	Novorossisk	Arr. Aug. 28
BULLMOUTH	Shanghai ..	—	At Del. Break.,	LUCERNA	Hamburg ..	Christiania..	L. Sept. 15
BULYSESSES	Cardiff	Balekappan	Sept. 16	LUCIFER	Philadelphia	London	Arr. Const'iple,
BURGERMEISTER	Oxelosund ..	Tyne	Arr. Sept. 10	LUCIGEN	Rotterdam ..	Tyne	May 5
PETERSEN	—	—	L. Sept. 16	LUCILINE	Dunkirk ..	Tyne	L. Sept. 20
CADAGUA	Seville	Philadelphia	Arr. Sept. 26	LUMEN	Marseilles ..	Kustendje ..	L. Sept. 24
CALCUTA (Br.bq.)	San Francisco	Shanghai ..	Arr. Sept. 10	LUX	Havre	Novorossisk	Arr. Sept. 26
CARDIUM	Cardiff	Singapore ..	L. Sept. 10	MAKKAVEI	—	—	Arr. Sept. 22
CAUCASIAN	Philadelphia	Liverpool ..	At Suez,	MANHATTAN	Savona	Messina	P. Const'ple,
CHARLOIS	Amsterdam	Philadelphia	Sept. 23	MANNHEIM	—	—	Sept. 20
CHESAPEAKE	Tyne	Philadelphia	Arr. July 12	MARGARETHA ..	—	—	Trading in Black
CHESTER	Antwerp	New York ..	P. the Wight,	MEXICAN PRINCE	—	—	Sea
CIRCASIAN	—	—	Sept. 23	MIRA	—	—	P. Leghorn,
PRINCE	—	—	Arr. Sept. 25	MUREX	—	—	Sept. 24
CLAM	Hong Kong	Shanghai ..	Off the Wight,	NARRAGANSETT..	—	—	Arr. Sept. 20
COWRIE	Batoum	—	Sept. 18	NERITE	—	—	Arr. Aug. 31
CYMBELINE	Avonmouth	Philadelphia	Trading on W.C.	NEW YORK	—	—	Sept. 17
CZAR NICOLAI II	Batoum	Hamburg ..	of South Amca.	OCEAN	—	—	P. Dardanelles,
DAGHESTAN	Manchester	Batoum	At Singapore,	ORANJE PRINCE..	—	—	Sept. 19
DAKOTAH	Hong Kong	San Francisco	Sept. 12	ORIFLAMME	—	—	L. Sept. 20
DELAWARE	New York ..	Liverpool ..	P. Fastnet,	OSCEOLA	—	—	P. Lizard,
DEUTSCHLAND ..	New York ..	Savona	Sept. 22	OTTAWA	—	—	Sept. 26
DIAMANT	Stettin	New York ..	Cd. Constant'ple,	OURAL	—	—	Tr. in China
ELAX	Samboe	—	Sept. 20	PALEMBANG	—	—	Seas
ELISE MARIE	New York ..	Swinemunde	Sept. 21	PAULA	—	—	P. Prawle Pt.,
ENERGIE	Philadelphia	Danzig	P. Dardanelles,	PECTAN	—	—	Sept. 21
ERIVAN	Batoum	Antwerp	Sept. 21	PENNOIL	—	—	Arr. Sep. 26
EUPLECTELA	Cardiff	Philadelphia	Arr. Sept. 5	PERLAK	—	—	Arr. Sep. 16
EXCELSIOR	Hamburg ..	New York ..	P. O. Hd. Kinsate	PHOEBUS	—	—	Arr. Sept. 20
EZIO	—	—	Sept. 26	PINNA	—	—	L. Sept. 6
FRANCE MARIE ..	Alicante	Philadelphia	P. Tarifa,	POTOMAC	—	—	P. Sand Key,
GEESTEMUNDE ..	New York ..	Hamburg ..	Sept. 21	PROMETHEUS	—	—	Sept. 3
GENESSE	London	New Orleans	P. Butt of Lewis,	PRUDENTIA	—	—	P. Lizard,
GEORGIAN	Philadelphia	—	Sept. 17	RION	—	—	Tr. Sts. Settlem'ts
PRINCE	—	—	L. Sept. 20	ROCKLIGHT	—	—	& China Seas
			L. Sept. 14				L. Sept. 22
			P. Dunnet Hd.,				P. Prawle Pt.,
			Sept. 23				Sept. 20
			P. Finisterre,				P. Dunnet Hd.,
			Sept. 25				Sept. 20
			P. Brow Head,				L. Sep. 2
			Sept. 26				Arr. Sept. 21
			Arr. Sept. 23				L. Sept. 24
			Coasting Peru				Arr. July 16
			Arr. Sept. 23				In Downs,
			Arr. Sept. 23				Sept. 24
			P. Cape Henry,				P. Lizard,
			Sept. 24				Sept. 23
			P. Dunnet Hd.,				P. Barry Island,
			Sept. 27				Sept. 18
							P. Barry Island,
							Sept. 16

Vessel.	From.	For.	Latest Date and Position.
ROSSIJA	Hamburg ..	Novorossisk	P. Tarifa, Sept. 1
ROTTERDAM (Now C. F. Tietgen)	Rotterdam ..	New York ..	Arr. Sept. 13
RUSSIAN PRINCE SALAHADJI	Philadelphia	Liverpool ..	Arr. Sept. 20 Tr. Sts. Settlem'ts & Java Seas
SEMINOLE	Calcutta	San Francisco	Arr. Aug. 28
SILVERLIP	Samboe	—	P. Finisterre, Sept. 26
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Philadelphia	Birkenhead	L. Sep. 19
SOPHIE	Kustendje ..	Messina	P. Consti'ple, Sept. 17
SPONDILUS	Blexen	Tyne	Arr. Sept. 20
STANDARD	Philadelphia	Konigsberg	P. Del. Break, Sept. 13
STROMBUS	Cardiff	Singapore ..	Arr. Port Said, Sept. 13
SURAM	Trieste	Avonmouth	Peniche, Sept. 24
SUWANEE	Tyne	—	P. Sagres, Sept. 18
SVIET	Alexandria ..	Odessa	Arr. Sept. 15
TELENA	Singapore ..	—	L. Sept. 13
TEREK	Batoum	London	Arr. Sept. 2
TIFLIS	Antwerp	Batoum	P. Gibraltar, Sept. 25
TIOGA	Philadelphia	Liverpool ..	Arr. Liverpool, Sept. 20
TONAWANDA	Hong Kong ..	Canton	L. Aug. 14
TROCAS	Tientsin	—	L. Sept. 23
TURBO	Philadelphia	Hamburg ..	Arr. Sept. 26
TUSCARORA	San Francisco	Kurrachee & Bombay	At Kurrachee, Aug. 22
TWINGONE	Rangoon	Madras	L. Sept. 13
VEDKA	Batoum	Liverpool ..	Arr. Sept. 24
VILLE DE DIEPPE	—	—	In Havre, Sept. 20
VILLE DE DOUAI	Ibrail	Campana ..	P. St. Vincent, Sept. 6
VOLUTE	Singapore ..	—	L. Sept. 23
WEEHAWKEN	Manchester	Philadelphia	P. Nantucket, Sept. 26
WILLKOMMEN ..	Tyne	Philadelphia	P. Nantucket, Sept. 26
WINNEBAGO (late Kinsman)	San Francisco	Hankow	L. Sept. 7

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

September 26th, 1906.

Refined Petroleum is unaltered as follows:—Russian and Roumanian, 6½d.; American, 6½d.; Water White, 7½d.

LUBRICATING OILS

Prices are unaltered, latest quotations being:—

American pale, £7 to £9 10s.
American dark cylinder, from £7 2s. 6d.
American filtered cylinder, from £11.
Shellene, £5.
No. 1 Russian, £10 7s. 6d.

TURPENTINE.

Since our last report, Turpentine has been fluctuating considerably, but towards the end of this week it is considerably firmer than it was, being quoted for spot 46s. 1½d., and October to December, 46s. 6d.; and for the first four months of next year 47s. 3d.

LIVERPOOL OIL MARKET.

September 28th.

Refined oils are quiet, and sellers now quote 5¾d. for Russian, Galician or Roumanian; and 6¾d. to 7¾d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, September 28th.

Refined, in cases, is easy at 10.30; Standard White, 7.60; Credit balances, 1.58c.

PHILADELPHIA, September 28th.

Standard White is still quoted at 7.55.

RUSSIA.

BAKU, September 24th.

The Baku oil market is stagnant, and prices shew a tendency to decline. Light crude oil, spot, 30 copecs per pood; heavy crude oil, 31¼ copecs per pood.

BELGIUM.

ANTWERP, September 22nd.

The petroleum market is unchanged. Price of Standard White, spot, 19½ francs per 100 kilos.; and three last months of the year 20 francs.

FRANCE.

PARIS, September 22nd.

Illuminating oil is quoted in bulk, in whole tank waggons, 20.25 francs per hectolitre; spirit, 25.25 francs per hectolitre. Special white oil, 28.50 francs per hectolitre.

GERMANY.

HAMBURG, September 24th.

The kerosene market is firm. The price of American Standard White is 7.10 marks per 50 kilos.

ROUMANIA.

September 23rd.

Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs.

Refined oil, exclusive of taxes	...	3.70	3.80
Motor benzine, including taxes	...	16.00	18.00
Benzine, doubly refined	...	24.00	25.00
Residuals in tank waggons, at refinery	...	3.00	—
Paraffin	...	120.00	125.00

Lubricating Oils —

Agricultural...	...	30	32
Prime	...	35	37
Extra	...	40	42
Royal	...	45	46

In barrels free on rail including octro tax of 12 fcs. per 100 kil.

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.00
Benzine, sp. gr. 0.710-0.715	11.00-12.00
" sp. gr. 0.720-0.725	8.00-9.00
" sp. gr. 0.735-0.760	6.00-7.00

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— QUOTATIONS ON APPLICATION.

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for .
this Journal by . . .
the Custom House. .*

FOR THE WEEK ENDED SEPTEMBER 17TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Sept.	LONDON—			
11	London Oil Storage Co.	.. Lub.	1,840	Hamburg
11	"	.. "	550	"
13	G. W. Sheldon and Co.	.. M.L.Gr.	150	Antwerp
13	G. and H. Green	.. Lub.	3,330	New York
13	A. Brown and Co.	.. "	2,400	Philadel.
13	J. Barber and Co.	.. Lub. Gr.	700	Hamburg
14	Ragosine and Co.	.. Lub.	5,110	Philadel.
14	Schliemans Oil Co.	.. "	2,400	"
14	T. S. Harris and Co.	.. M Lub.	9,680	"
14	T. H. Lee	.. "	277	Hamburg
14	T. S. Harris and Co.	.. Lub.	1,000	"
15	London Oil Storage Co.	.. "	1,792	"
15	W. B. Dick and Co.	.. "	4,600	Philadel.
15	Mordaunt Bros.	.. "	10,200	"
17	T. H. Lee	.. "	130	Hamburg
17	London Oil Storage Co.	.. "	800	"
17	R. Park and Co.	.. "	120	Marseilles
17	E. G. Walkenshaw	.. "	10,000	Philadel.
17	Anglo-American Oil Co.	.. "	62,800	"
17	"	.. L.Gr.	600	"
17	Furness, Withy and Co.	.. Crude	200	Halifax
17	Britannia Engineering Works	Lub.	200	N. Brunswick
	LIVERPOOL—			
11	J. T. Fletcher and Co.	.. M.Colza	250	Ghent
11	American Line	.. M.Lub.	1,490	Philadel.
11	Geo. B. Taylor	.. L.Comp.	400	New York
11	Pickford's, Ltd.	.. L.Paste	500	Hamburg
12	A. Hopps and Sons	.. Resid.	10,000	Montreal
12	Meade-King, Robinson & Co.	.. "	9,440	Rotterdam
13	G. B. Taylor	.. Mill Gr.	4,000	Philadel.
13	Meade-King, Robinson & Co.	M.Lub.	118,200	"
13	"	.. Resid.	4,800	"
13	"	.. Illum.	20,000	"
13	Crew, Levick and Co.	.. M.Lub.	35,193	"
14	W. B. Dick and Co.	.. Lub.	1,300	"
14	Worthington and Boler	.. M.Lub.	6,200	"
14	Wakefield and Co.	.. M.L.Gr.	248	Antwerp
15	Valvoline Oil Co.	.. M.Lub.	4,100	New York
17	Dee Oil Co.	.. L.Gr.	2,388	"
17	Liverpool Storage Co.	.. Lub.	3,200	"
17	Meade-King, Robinson & Co.	M.Lub.	8,000	"
	BRISTOL—			
6	First Anglo-Russian Oil Co.	.. "	250	Hamburg
12	Pickford's, Ltd.	.. "	420	"
12	Pritchard and Co.	.. Lub.	280	"
15	H. R. James and Sons	.. "	3,400	New York
15	"	.. M.Colza	1,200	"
15	W. Smith and Co.	.. Lub.	19,200	"
	GOOLE—			
15	J. Sutcliffe and Son	.. "	1,160	Antwerp
	GRIMSBY—			
10	J. Sutcliffe and Son	.. "	80	Hamburg
11	"	.. "	80	Antwerp

DATE. Sept.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
	HULL—			
11	Wilsons and N.E. Railway Shipping Co.	Lub.	3,200	Hamburg
11	Thos. Wilson, Sons and Co.	.. "	920	Antwerp
12	Hull and Nether. S.S. Co.	Tar Oil	2,200	Rotterdam
12	"	.. "	2,400	"
12	Wilsons and N.E. Railway Shipping Co.	.. "	3,920	Antwerp
10	"	.. "	1,320	Hamburg
10	"	.. "	640	Antwerp
13	Thos. Wilson, Sons and Co.	.. "	4,000	S. Petersburg
13	"	.. "	11,760	New York
14	"	.. "	1,000	Riga
15	Wilsons and N.E. Railway Shipping Co.	.. "	600	Antwerp
17	W. Gillyott and Co.	.. "	4,000	Trieste
17	Hull & Netherlands S.S. Co.	Tar oil	3,600	Rotterdam
	MANCHESTER—			
11	Consolidated Pet. Co. (Kura)	Gas	500,000	Batoum
12	Liverpool Storage Co.	M.Lub.	2,428	Philadel.
12	Liverpool Warehousing Co.	.. "	28,800	"
12	H. Wills Oil Co.	.. "	1,600	"
12	Crew, Levick and Co.	.. "	12,528	"
12	"	.. M.Colza	4,108	"
12	D. Currie and Co.	.. Lub.	240	Hamburg
13	Consolid. Pet. Co. (Rion)	.. Gas	783,080	Batoum
13	W. Hodgson and Co.	.. M.Lub.	2,886	Philadel.
13	Meade-King, Robinson & Co.	.. "	76,600	"
17	F. Woodhill and Co.	.. Nit. Benz	1,400	Treport
23/8	Anglo-Am. Oil Co. (Genesee)	Gas	28,758	Philadel.
	MIDDLESBRO'—			
12	E. Harris and Co.	.. M.Lub.	1,600	Antwerp
	NEWCASTLE—			
8	Tyne-Tees S.S. Co.	.. "	3,560	"
17	"	.. "	1,600	Hamburg
	SWANSEA—			
5	Burgess and Co.	.. "	1,000	New York
11	"	.. "	186	Hamburg
	DUNDEE—			
13	D. Alexander and Sons	.. "	800	"
	GLASGOW—			
4	Clyde Shipping Co.	.. "	380	Antwerp
12	Anchor Line	.. "	2,533	New York
12	J. and A. Allan	.. "	41,600	Philadel.
12	"	.. M.Colza	3,000	"
14	Clyde Shipping Co.	.. M.Lub.	190	Antwerp
17	Anchor Line	.. "	3,150	New York
	GRANGEMOUTH—			
11	W. Graham-Yooll and Co.	Lamp	2,000	Hamburg
11	J. Currie and Co.	.. Lub.	120	"
	LEITH—			
10	W. Graham-Yooll and Co.	Illum.	4,360	"
10	G. Gibson and Co.	.. Lub.	1,860	Antwerp
13	J. Currie and Co.	.. "	2,000	Hamburg
17	"	.. "	2,170	"
	Total for the Week	..	1,928,155	

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== QUALITY TELLS. ==

To Dealers only.

FOR THE WEEK ENDING SEPTEMBER 24TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Sept. LONDON—				
18	Fielder, Hickman and Co...	Lub.	36,520	New York
18	"	"	2,740	"
18	"	Lub.Gr.	2,600	"
18	Schlieman's Oil Co...	Lub.	480	Hamburg
18	J. Hardy	M.Lub.	4,800	New York
19	Anglo-American Oil Co. (Narragansett)	Lub.	259,460	"
19	"	Lamp	2,769,080	"
20	"	Lub.	30,000	"
20	London Oil Storage Co. ..	"	4,000	Philadel.
20	A. Brown and Co. ..	"	3,000	"
20	London Oil Storage Co. ..	"	1,720	Hamburg
20	Schenker and Co. ..	"	1,350	Antwerp
21	Worthington and Boler ..	"	5,200	Philadel.
21	Mordaunt Bros. ..	"	32,240	"
21	Schliemann's Oil Co. ..	"	4,000	New York
21	T. H. Lee	"	780	Hamburg
22	W. Balchin	"	12,560	Philadel.
22	A. Brown and Co. ..	"	4,800	"
24	G. W. Sheldon and Co. ..	M.L.C.	2,856	New York
24	Mordaunt Bros. ..	Lub.	10,200	"
24	J. Harrison, Ltd. ..	"	900	Treport
24	Asiatic Petroleum Co. (Silverlip)	Benzine	2,183,950	Pulo Samboe
24	G. W. Sheldon and Co. ..	M.L.Gr.	300	Antwerp
24	"	M.Lub.	40	"
LIVERPOOL—				
18	Liverpool Storage Co. ..	Lub.	3,200	New York
18	"	"	600	"
18	Crew, Levick and Co. ..	M.Lub.	3,900	"
18	A. Hopps and Sons ..	"	2,400	Baltimore
19	E. Harrison and Co. ..	"	20,000	"
19	Meade-King, Robinson & Co.	"	15,600	"
19	Crew, Levick and Co. ..	"	12,460	Montreal
20	W. B. Dick and Co. ..	Lub.	6,330	Philadel.
20	Burnaby and Chantrell ..	"	3,020	New York
21	Geo. B. Taylor	L.Gr.	8,000	Philadel.
21	Crew, Levick and Co. ..	Lub.	18,090	"
21	"	M.Colza	4,150	"
21	Meade-King, Robinson & Co.	Lub.	54,560	"
21	Anglo-American Oil Co. ..	Gas	698,000	"
21	George B. Taylor	M.Lub.	67,080	New York
22	"	"	63,280	"
24	Valvoline Oil Co. ..	Lub.	2,870	"
24	C. W. Field	M.Lub.	418	Antwerp
24	Meade-King, Robinson & Co. (Vedra)	Gas	477,800	Batoum
24	"	Illum.	543,000	"
24	"	M.Lub.	20,800	Hamburg
24	W. Gibson and Sons ..	M. Lamp	2,050	Boston

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Sep. BRISTOL—				
19	Anglo-American Oil Co. (Cymbeline)	Lamp	1,693,770	Philadel.
20	First Anglo-Russian Oil Co.	Lub. Gr.	520	Hamburg
22	Pickfords	M.L.P.	552	"
22	"	M.Lub.	648	"
22	H. R. James and Sons ..	Lub.	13,800	New York
22	W. Smith and Co. ..	"	12,800	"
CARDIFF—				
22	Guthrie, Heywood and Co.	"	2,400	Baltimore
GRIMSBY—				
20	J. Sutcliffe and Son ..	"	990	Antwerp
20	"	"	50	Rotterdam
20	"	"	130	Antwerp
HULL—				
19	Wilsons and N.E.R. S. Co.	"	2,000	Hamburg
20	"	"	10,800	"
20	T. Wilson, Son and Co. ..	Naph.	1,161	Reval
20	"	Lub.	800	S. Petersburg
22	Wilson and N.E.R. S. Co.	"	240	Hamburg
MANCHESTER—				
18	Meade-King, Robinson & Co.	"	10,400	"
18	J. T. Fletcher and Co. ..	"	880	Antwerp
20	Jones, Dooby and Co. ..	M.Lub.	850	"
24	Lamport and Holt ..	"	2,130	New York
NEWCASTLE—				
20	Tyne-Tees S.S. Co... ..	Lub.	100	Hamburg
20	"	"	200	"
GRANGEMOUTH—				
18	J. Currie and Co.	"	6,000	"
20	W. Graham-Yooll and Co...	Lamp	2,000	"
LEITH—				
17	J. Cormack and Co. ..	M.Lub.	2,000	Riga
20	W. Graham-Yooll and Co...	Lamp	2,180	Hamburg
21	Henderson and McIntosh ..	Lub.	39,006	Philadel.
24	"	"	18,200	New York
24	J. Currie and Co.	"	240	Hamburg
BELFAST—				
19	G. Heyn and Sons	"	1,720	Riga
22	T. Dixon and Sons	"	420	Baltimore
Total for Week			9,228,764	
Total for the past Fortnight ..			11,157,919	

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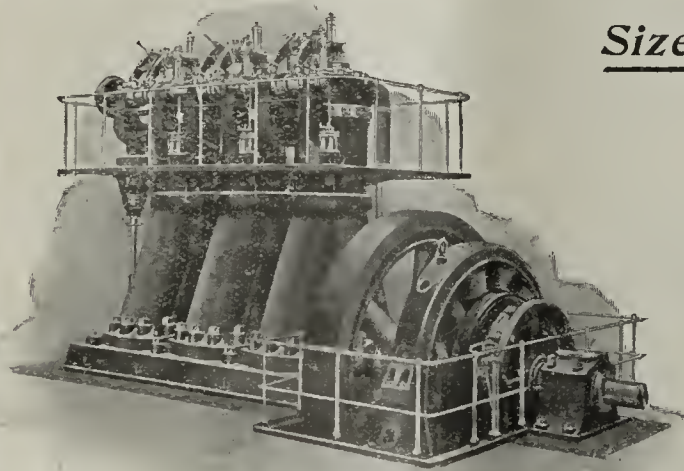
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

OCTOBER 13TH, 1906.

No. 383.

Editorial Notes.

The congestion which we spoke of *Progress in* some few months ago as existing in the *Borneo.* Borneo fields, consequent upon the remarkable productivity of the wells there, still continues, and the figures which we publish elsewhere of the operations of the Nederlandsch Indische Industrieen Handel Maatschappij—the producing branch of the Shell Transport and Trading Co. in the Far East—are ample evidence of this. During the present year the management have found it necessary to considerably curtail the production of crude oil, many wells having been shut down, and so the crude production for the past three months has been over 15,000 tons less than during the corresponding period of last year, and over 16,000 tons less than it was during the preceding three months, but taking the whole of the production for the nine months of this year, it is only about 1,000 tons short of the yield for the similar period of 1905. As we say, this curtailment of the production has been purposely brought about in order that the congestion may be relieved.

Now let us take a few of the figures which *A Few* go to shew a more rosy side of the picture. *Figures.* If there are not sufficient means to handle crude oil production, then an enormous yield from the wells signifies but little. In the present case, however, we see the good account into which the production has been turned, and here it is that we can make a few comparisons with the state of things that prevailed a year ago. In a word, remarkable increases are shewn all round. For instance, the intake of the refineries during the past quarter has been 14,000 tons more than was the case from March to June, the output of kerosene being 3,000 tons more than was then the case, and that of other products accounting for the difference. The stocks above ground shew an increase of nearly 10,000 tons over those of a corresponding period of last year, while those awaiting shipment are in advance of those a year ago of over 13,000 tons. The total stocks of crude and products are now put down at 79,000 tons as against 58,000 at this time in 1905. In the face of these figures it would appear that though every effort is now being made to relieve the glut of production on the fields, the difficulty for the present has by no means been overcome.

In spite of the now extended use of petrol *Nine* which has of late years helped to swell the *Months'* total of petroleum and its products im- *English-*ported into the United Kingdom, the figures *Petroleum* for the past nine months' trade in this *Imports.* direction shew a decline of several million gallons, as against the volume of trade for the similar period of last year. The illuminating oil imports and also those of solar oil are responsible for

the decrease, the former having decreased by about 16,000,000 gallons, and the latter nearly 8,000,000 gallons, but to somewhat counteract this tendency, lubricating oil and petroleum spirit has been imported into this country in larger quantities than formerly, and thus the total is brought, as we have said, within 7,000,000 gallons of that for the nine months of last year. During the similar period of last year, Russia was not at its best, yet its fields had been more free from disastrous strikes, and consequently it was able to engage in trade in petroleum with this country to the extent of 20,000,000 gallons more than it has this year. America has imported a total quantity of petroleum products which is practically the same as last year, her decreases in illuminating oil and benzine being counter-balanced by the additional quantities of American lubricating oil which we are now receiving. Germany is coming considerably to the fore with her imports of Galician oil to this country, but one of the main points which stand out in our list of petroleum imports is the progress which the Dutch Indies are making in regard to exports to the United Kingdom. This trade is, of course, chiefly in benzine, whereas last year we imported only 4,000,000 gallons from Sumatra, etc., the figures for this year stand at over 10,000,000 gallons. It is therefore plain that the American trade with this country has not been so great as was expected. Apparently the resources of other producing countries have been underestimated.

Among all the wild rumours which *From Kansas* continue to hold sway throughout the *to the Gulf.* Mid-Continental fields of America of the piping of Kansas oil to the Gulf of Mexico, and thus relieving the present glut which has rendered necessary a general stoppage of work throughout the territories, comes definite news of the inauguration of a proposal to remedy the present state of congestion. The Prairie Oil and Gas Co. is now removing day by day 1,000 barrels of oil from Tulsa, and treating it at one of the refineries at Corsicana. The daily removal of this comparatively small quantity from the congested districts of production is not in itself perhaps of very great importance, but it is the first movement of Oklahoma oil toward the Gulf of Mexico, and constitutes the beginning of a movement that is bound to have a beneficial influence upon the petroleum industry, not only of the Mid-Continental fields but also upon Texas, where a continually declining production is now the general rule. The matter is referred to elsewhere in this issue; we need only say that from the time when the Kansas and Indian Territory fields assumed proportions of importance in the production of petroleum, we have always contended that the time would come when a continuous outlet would be found for the product *via* the Gulf of Mexico, and we certainly were the first to suggest the laying of a pipe line which would loop up the more important inland territories.

IMPORTS OF PETROLEUM PRODUCTS INTO GERMANY IN AUGUST.

According to the official customs statistics the following quantities of petroleum products were imported into Germany during August, compared to July :—

	August. Tons.	July. Tons.
Illuminating oil	47,223	69,058
Lubricating oil	12,951	16,583
Crude oil	1,916	1,911
Crude benzine	4,964	8,695
Refined benzine and petroleum ether	1,340	1,474
Residuals	45	107
Artificial turpentine and other mixtures	83	42
Gas oil	114	—
Total	68,636	97,870

The imports of petroleum products from the different producing countries were as under :—

	August. Tons.	July. Tons.
U.S.A.	49,370	66,711
Russia	8,013	12,094
Dutch-India	3,213	6,793
Austria-Hungary	3,767	6,668
Roumania	3,196	2,688
Other countries	1,277	2,926
Total	68,836	97,870

The quantities of various petroleum products exported from Germany during August were :—Illuminating oils, 66 tons; lubricating oils, 810 tons; benzine, 794 tons; residuals 217 tons; total 1,887 tons.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM CO., LTD.—The production for the week ended 6th October was 259,000 poods, or 4,175 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL CO., LTD.—The production for the week ended October 7th was 240,000 poods, or 3,869 tons.

SPIES PETROLEUM CO., LTD.—The output for the week ended 30th September was 139,325 poods, or 2,247 tons.

THE EUROPEAN PETROLEUM CO., LTD.—The production for the week ended 30th September was 117,080 or 1,888 tons; and for the week ended 7th October was 116,939 poods, or 1,885 tons.

LONDON OIL SHARE MARKET.

FRIDAY, OCTOBER 12TH.

Although business has been very small in the oil share section of the London Stock Exchange since our last issue—changes in quotations being only of a trivial nature—the general tone keeps good, and the prospect for a range of higher value is promising. For the convenience of our readers we quote prices in full for Saturday, September 29th, which were as follows :—

Anglo-Russians $\frac{1}{16}$ – $\frac{1}{8}$, Assam Oil $\frac{5}{8}$ – $\frac{7}{8}$, Bibi-Eybats $\frac{7}{16}$ – $\frac{9}{16}$, Debentures 86–91, Baku Ordinary 2s. 3d. to 2s. 9d., Preference 4s.–5s., Californian Oilfields $5\frac{1}{4}$ – $5\frac{3}{4}$, Refineries $\frac{1}{16}$ –to $1\frac{1}{16}$, European Preference $\frac{1}{8}$ – $\frac{1}{4}$, Debentures 82–85, Russian Ordinary 10s. 6d. to 11s. 6d., Preference 11s. to 12s., Debentures 90–92, Schibaieff Ordinary 7s. 6d. to 8s. 6d., Preference $2\frac{1}{2}$ –3, Spies $\frac{1}{3}$ – $\frac{1}{2}$, Shell Transport Ordinary $9\frac{1}{4}$ – $\frac{3}{4}$, and Preference 29s. 6d. to 30s. 6d.

On Monday Californian Refineries rose $\frac{1}{16}$ to $1\frac{1}{16}$, and the market remained quiet until Thursday when it weakened, Russians losing 1s. at 9s. 6d.–10s. 6d., while the Preference and Schibaieff Ordinary both lost 6d. at 11s.–11s. 6d. and 7s.–8s. respectively. Fridays dealings also had a lagging tendency, Californian Oilfields falling $\frac{1}{4}$ to $5\frac{1}{2}$ and Anglo-Russian relapsing to the nominal price of equal to $\frac{1}{8}$.

No further alterations took place till the following Wednesday when the tone strengthened, Baku Preference gaining 6d. at 4s. 6d. to 5s. 6d., while Californian Oilfields rose $\frac{1}{2}$ to $5\frac{1}{2}$ –6, and on Thursday the improvement continued, Baku Ordinary and Preference both advancing 6d. and closing firm at 2s. 9d.–3s. 3d. and 5s.–6s.

At the mid-October settlement, which commenced on the 10th, rates of interest were a good deal stiffer, 8 per cent. to 9 per cent., and even higher being exacted for various miscellaneous securities. A comparison of "making-up" prices from those fixed at the end-September account shews a decided improvement. Baku Ordinary at 2s. 9d. gained 3d., Preference 6d. at $\frac{1}{4}$. Californian Oilfields, $\frac{1}{4}$ at $5\frac{5}{8}$. Russian Ordinary 1s. at 10s. 3d., Preference $\frac{1}{16}$ at $\frac{9}{16}$ and Schibaieff Ordinary 1s. at $\frac{7}{8}$. Shares without change were Shell Transport Ordinary at $1\frac{1}{2}$, and Schibaieff Preference at $2\frac{3}{4}$, while the only fall was in Anglo-Russians, which lost 3d. at $\frac{1}{16}$.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR MARCH AND APRIL, 1906 (In poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

			Submitted to Distillation.			Products Received.				
			Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.	Fuel used.
March .. .. .	..	..	29,593,358	373,547	29,966,905	6,675,004	20,251,939	1,374,014	1,665,948	997,441
April .. .. .	..	..	29,282,226	63,257	29,345,483	7,393,132	20,148,949	1,078,053	725,349	801,918

Refining

			Submitted to Refining.			Refined Products Obtained.			Chemicals used.	
			Kerosene.	Other Distillates.	Total.	Kerosene.	Other Products.	Loss in Refining.	Acid.	Soda.
March .. .. .	..	..	7,513,660	36,597	7,550,257	7,359,437	34,239	146,581	28,111	9,697
April .. .. .	..	..	7,214,046	103,494	7,307,540	7,039,159	86,976	185,405	28,495	11,540

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

			Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
March .. .. .	..	..	1,335,530	149,374	75,823	981,166	716,690	680,129	33,011	523,114	656,681
April .. .. .	..	..	1,024,639	152,961	41,637	872,512	404,538	413,933	22,722	288,403	555,492

Refined Products Received.

										Chemicals used.					
										Acid.		Soda.			
				Spindle Oil.		Machine Oil.		Cylinder Oil.		Loss in Refining.					
March	178,332	..	1,198,714	..	51,020	..	149,067	..	31,448	..	4,225
April	55,568	..	1,140,570	..	17,478	..	128,973	..	39,218	..	5,024

The output of benzine distillates amounted to 51,340 poods in April, against 104,568 poods in March. The output of refined benzine was: 25,367 poods in April against 73,697 poods in March.

International Association of Boring Engineers.

THE TWENTIETH ANNUAL CONFERENCE.

(Continued from page 186.)

The formal annual meeting of the Association of Boring Engineers took place on the 11th September. As president for next year's meeting, which is to be held at Hamburg, Professor Tecklenburg, of Darmstadt, was elected; and as vice-presidents, Professor Oebbekke and Mr. R. Sorge.

After the formal business was transacted, the reading of technical papers was resumed, Mr. J. Schenk, of Messendorf, presenting a paper on "The Development of the Petroleum Production and Boring Science in Galicia."

The production of petroleum on a considerable scale began, he said, in Galicia much earlier than in America or anywhere else. It is an established fact that the German mining engineer, Joseph Hecker, between the years 1810 and 1817, explored the neighbourhood of Boryslaw, and in partnership with one, Johan Mitis, produced illuminating oil. As far back as 1817 these two pioneers secured an order from the municipality of Prague for 30 tons of their distillate, which was to be used for street lighting. Through the delays of the carriers the delivery was not made in proper time, the business failed, and with it the whole enterprise ceased. Hecker and Mitis had to satisfy themselves with the fame which posterity bestows upon them as being the first to produce illuminating oil as an article of commerce.

The distillation of petroleum was also carried on later, but only the residuals were used as cart grease, whilst the distillate remained unutilised.

A second attempt at creating a petroleum industry was made much later, in 1854, by Ignaz Lukasiewicz, a dispensing chemist of Lemberg, and this was completely successful. Lukasiewicz, who in 1855 was lighting the Lemberg hospital with petroleum, erected several petroleum refineries in West Galicia, and in company with a Mr. Klobassa created the petroleum producing industry at Bobrka. Gradually other oil fields were opened up, and small refineries came into being everywhere in Galicia until the momentous step forward was made by Stanislas Szczepanowski, who erected a large modern illuminating and lubricating oil refinery at Peczenizyn.

The opening up of oil deposits in Galicia was made partly by hand shafts and partly by boreholes. Hand shafts were used at places where the influx of water and gas exhalations were not great. These shafts in Galicia were generally square, 4 feet each side, lined with timber, and to a depth of 150 metres they were no dearer than boreholes. They had the considerable advantage in plainly revealing the whole structure of the strata, but on the other hand their making was slow and attended with danger.

Hand borings were then tried, and proved fairly successful. As time was considered money, however,

and capitalists wanted rapid success and production, while there were cases when the one who reached the oil stratum sooner drew the oil off from his neighbours, boring engineers had to direct their attention to the adoption of steam power for drilling purposes. The first firm to produce a really practical steam drilling rig was the Messendorfer Maschinenfabrik, whose appliances for drilling and baling of wells came first into use at Sloboda Rungurska, and were eagerly taken up.

In the years 1883 and 1884 the Canadians came to Galicia. With their own tools, machinery, boilers and pipes they obtained in eastern and western Galicia really astounding results, and in an incredibly short time the use of Canadian tools and methods spread throughout Galicia. At that time Mr. Fauck came on the scene with his patented boring rig, and achieved good results at Kleczany and other places in West Galicia, Hungary and Bosnia.

After the Canadian drilling system had been improved and adapted for the special needs of the Galician petroleum industry by Mr. McGarvey, that system came into use throughout Galicia. When the Canadian system came to Galicia there were no boring contractors there, and every producer drilled for himself. The Canadians began to work as boring contractors for wells, which at the time scarcely exceeded 400 metres in depth, and made large amounts of money thereby. The financial success thus achieved induced Galician boring engineers to follow the same way, and at present there was a considerable number of boring contractors working with varying success.

The successes of the Canadian system did not allow Mr. Fauck to rest, for he soon came out with his "Rapid" water-flush system, and subsequently with his "Express" boring system. The last-named system, Mr. Schenk considered the most perfect boring system known, which had yielded brilliant results.

The success achieved by the water-flush system had aroused the open antagonism of those interested in other boring systems. For years a heated discussion raged round this question, and much was said and written for and against water-flush drilling. At present there was scarcely any reasonable man who still believed in the possibility of watering oil strata by water-flush drilling.

Mr. Fauck's success stimulated other engineers to work in the direction of water-flush drilling, and now they had Mr. Wolski's hydraulic boring ram, as well as water-flush systems by Mr. Mikucki, Van Sickle and others. The main issue, however, in Galicia lay between the Canadian and Mr. Fauck's "Express" system, and only the future would shew with whom victory would rest. The great progress made during the last 40 years went hand-in-hand with the development of the crude oil production. Whilst in 1875 the total production was only 20,000 tons, it had reached 800,000 tons in 1905, having thus in 30 years increased 40 times.

The predominant factor in that development of the production was the opening up of the Boryslaw-Tustanowice oil field with its phenomenal wells. It was also assisted by the construction of various railways, the laying of long pipe lines, which acted as feeders to the railways, the construction of numerous tank waggons, formation of petroleum storage companies, etc. All that had assisted in causing capital to take a constantly growing interest in the the Galician petroleum industry. In addition to the above-mentioned principal field there were a number of the oil fields which yield a good, in some cases splendid, return on capital. There were also such places where in spite of the great energy and perseverance applied, there was no return either for labour or capital. That, however, was not the exclusive attribute to Galicia, but was common to the oil fields of all countries.

The fears that the most prolific oil fields in Galicia would be soon exhausted could be dismissed, for the experience in other petroleum producing countries had shewn that by the time one oil field began to get exhausted others were found to take their place, and the same was repeating itself in Galicia.

ORGANISATION AMONG THE GALICIAN PETROLEUM PRODUCERS.

As was expected, the proposal made by the Vacuum Oil Co. to the producers, *re* sale of their crude oil on commission, particulars of which we gave in a former issue, was promptly followed up by another fresh proposal from the financial group which are interested in the Petrolea Co. This latest proposal has been provisionally accepted by the representatives of the producers, and will probably be agreed to by the requisite majority of the producers at a meeting to be shortly called for the purpose of enabling the agreement to come into force.

The main terms of the proposal are as under:—The agreement *re* the financing of the sales of crude is to be made by the producers direct with the Kreditanstalt, an important Vienna bank, which undertakes to make a non-returnable advance of 27½ kronen on every ton of crude delivered for sale, with retrospective effect from the 1st of May, 1906. The rate of advance can be reduced to 25 kronen per ton, if by the 15th October 95 per cent. of the purely producing firms had not

adhered to the agreement, or if by the 30th of November the firms who had joined do not represent 90 per cent. of the total production of Galicia (including the refining and producing firms). The agreement is to be made for a period to end on 30th April, 1910. In the last year of the agreement, if no renewal has been agreed upon, the advance will be reduced to 22½ kronen per ton. During the term of the agreement the rate of advance can be reduced on the following two occasions: when the stocks of the purely producing firms will have reached 500,000 tons. In that case the rate of advance will be reduced by 75 heller for every 10,000 tons addition to the stocks, when the original rate of advance was 27½ kronen and 50 heller when the rate was 25 kronen. When the total half-yearly output in Galicia will exceed 450,000 tons, the advance will be reduced to a figure not exceeding 85 per cent. of the average net price realised for the crude oil in the last month, after deducting cost of storage, commission, etc.

The total amount of advances shall at no time exceed 11,000,000 kronen.

The sales will be made by a committee, in which the Kreditanstalt will have 10 per cent. of the votes. The price cannot be reduced below 32½ kronen per ton, except by a majority of three quarters of the votes.

The participation of the Kreditanstalt in the profits of the sales begins at the minimum price of 27½ kronen, plus expenses of storage and sale, which are charged to the producers; but 2 kronen of these expenses are not taken into account in the profit sharing. Thus, for instance, when the expenses amounted to 3½ kronen, the participation begins only at 29 kronen; with 3 kronen expenses, the participations begins at 28½ kronen, so that the Kreditanstalt are interested in keeping down expenses. In a surplus of 5 kronen above the minimum price of 27½ kronen, plus expenses reduced by 2 kronen, the Kreditanstalt participate by 30 per cent. on a further surplus of 5 kronen, they get 20 per cent.; and on a third surplus of 5 kronen they get 15 per cent.

The agreements for the storage and sale on commission of crude oil have to be made between the producers and the Petrolea Co., the Kreditanstalt undertaking responsibility for the financial obligations of the Petrolea Co. towards the producers.

Every producer who in any half year will have delivered to the Petrolea Co. 6,000 tons of crude, will be entitled to a seat on the executive committee. The head office of the Petrolea Co. will be, and the accounts are to be kept, at Lemberg. The abrogation of the financial agreement with the Kreditanstalt will automatically annul the agreement with the Petrolea Co.

BAKU DELIVERIES IN JULY.

The following are the quantities of various petroleum products forwarded from Baku to various directions in July (in poods):—

Direction.	By Transcaucasian Railway—	Illuminating Oil.	Lubricating Oil.	Residuals.	Crude Oil.	Other Products.	Total.
To Batoum	1,950,445	538,269	84,267	—	46	2,573,027
„ Other stations	89,965	2,645	57,075	538,848	12,889	701,422
„ Baku-Petrovsk branch	21,439	644	330,244	803	11,141	364,271
„ Caspian Sea—							
To Astrakhan	2,928,049	351,048	24,663,505	2,057,913	83,351	30,083,866
„ Petrovsk	209,624	—	4,800	—	—	214,424
„ Transcaspian province	178,909	—	347,436	—	—	525,345
„ Other Russian ports	433	242	366,705	30,699	27	398,106
„ Persia	124,550	—	2,589	—	—	127,139
„ Road	45,438	8,982	82,087	1,271	7,220	144,998
Total July, 1906	5,548,852	901,830	25,938,708	2,629,534	114,674	35,133,598
„ „ 1905	7,554,654	1,825,621	48,791,708	3,351,742	250,978	61,774,703

THE LONDON OIL STORAGE COMPANY, LIMITED = = =

*A Successful
Enterprise.*

The extensive developments which have taken place during the last quarter of a century in connection with the importation of petroleum and its products into this country are forcibly illustrated in the successful career of the London Oil Storage Co., Ltd., a concern which does an enormous business as public wharfingers, devoted almost solely to this important branch of London's commerce. The carriage of oil in bulk to this country from far-off producing lands is of comparatively recent growth, and so it consequently follows that, wherever we look, the large business which is now carried on by the various oil storage companies in London is likewise modern in its character, at least so far as its present extensive form is concerned.

The business of the London Oil Storage Co., Ltd., however, is, without doubt, one of the oldest of its kind

The wharves, all three of which are within half an hour of the City are fully equipped with machinery and appliances of the latest modern type with steam and gas cranes and pumps, the whole arrangements of the company's system of business being up-to-date in every way. The company (which was formed in 1885) possesses a total tank capacity of nearly 30,000 tons of petroleum or its products, while its resources for receiving and storing oils, etc., in barrels and casks are practically unlimited. The London Oil Storage Co. handles almost the whole of the turpentine which comes into London, while apart from the enormous business they do in storing illuminating oil and benzine, they are called upon to handle large quantities of resin, pitch, lubricating oils, tar, and other similar products. The company also owns a large fleet of both tank and open barges



ONE OF THE COMPANY'S STORAGE INSTALLATIONS.

in this country, having been originally established as far back as half-a-century ago. In fact, it was in 1851 that it was initiated upon a relatively small scale at Mellish's wharf, on the Thames, at Millwall, for the area acquired was only two acres in extent. With the growth of the trade, and the consequent increase in the demands of the proprietors' resources, two other and larger wharves were at different times added, one of these being Palmer's wharf, at Bethnal Green, covering upwards of four acres, with a considerable frontage on the Regent's Canal, a private siding directly communicating with the Great Eastern Company's main line at Devonshire Street, and good facilities for up-town delivery of petroleum products; and the other Dudgeon's wharf at Millwall, having the still larger extent of six acres, with a quay frontage of over nine hundred feet on the River Thames. Thus, to-day, something like twelve acres are monopolised for the storage of oil, as compared with one-sixth of that space when the business was founded—a fact which in itself says a great deal for the remarkable bounds forward made in the storage of petroleum in London, and the ever-increasing importance of the trade.

which are necessary for the proper carrying on of the business, a noteworthy incident in the history of the company being that they were the first to successfully handle a cargo of illuminating oil.

The sound and well-considered business methods upon which the vast operations of the London Oil Storage Co. are conducted, and the smooth and satisfactory working of each department is abundant testimony of the energy and systematic ability of the management, and reflects great credit alike on the efficiency of the staff, and the watchful attention of the directors and their courteous manager—Mr. H. T. Hubble.

THE HOMELIGHT COMPANY'S NEW ASSISTANT MANAGER.

Our readers will be interested in learning that Mr. Charles E. Stroud has succeeded Mr. F. W. Parry as assistant manager and secretary of the Homelight Oil Co. Like his predecessor, Mr. Stroud is well known throughout the oil trade, having, previous to his present appointment, occupied the position of branch manager at the Homelight's Hull depôt.

AMONG THE CONSULS.

KEROSENE IMPORTS INTO BANGKOK.

The report of the British Consul upon the trade and commerce of the capital of Siam—Bangkok—during 1905 has just been issued. Herein it is pointed out that the kerosene figures continue steadily to improve, for 5,733,198 gallons, valued at £119,348 were imported during the year:—

Country.	Quantity.	
	Gallons 1904.	Gallons 1905.
Sumatra	5,335,188	5,062,384
Singapore	66,758	96,464
United States	18,134	574,350
Hong-Kong	12	—
Total	5,420,093	5,733,198

The foregoing figures shew a great advance in the quantity supplied by the United States. This increase is, says the Consul, doubtless due to the establishment in Bangkok of an agency of the Standard Oil Co. during 1905.

PETROLEUM IMPORTS INTO TAINAN.

Consul Wileman, in his annual report upon the trade of the consular district of Tainan (South Formosa) for the year 1905, states that during that twelve months kerosene was imported to the extent of 900,920 gallons, and was valued at £22,214. Compared with the figures for 1904 the quantity of kerosene shews a decline, while the value decreased by £16,875. The figures for 1904 were 1,733,525 gallons, valued at £30,089.

PETROLEUM IMPORTS INTO FOOCHOW.

Mr. Herbert F. Brady, the English Consul at Foochow, in his annual report upon the trade and commerce during 1905, says that American kerosene, which, as he pointed out in his report for the year 1903, had almost entirely disappeared from the market, but which rose substantially in 1904, had now again established itself, the imports for the year being 868,040 gallons, and valued at £19,298. The Sumatra oil, however, still maintains its lead, accounting for 2,200,550 gallons, valued at £39,461, though it shews a considerable falling off from the previous year when the import was 3,914,009 gallons, valued at £93,172.

VENICE AND ITS PETROLEUM IMPORTS DURING 1905.

In reporting upon the trade and commerce of Venice during 1905, the English Consul, Mr. de Zuccato, makes reference to the fact that no machinery for supplying ships with liquid fuel has yet been installed in Venice. Fears are entertained, he says, that although the problem of navigating ships economically and efficiently with liquid fuel is apparently solved, yet the difficulty of transporting it and of obtaining it abroad, may preclude its adoption on a wide scale. In fact, British steamship owners trading with Venice have not been anxious to employ

this fuel, while foreign lines, such as the Hamburg-American Co. and others have preferred it. Besides this no abatement has yet been made in the duty on crude petroleum or other lubricating oils, which at present is very heavy. With regard to what kind of liquid fuel should be adopted for propelling ships, it would appear from the opinion of naval engineers that a somewhat refined oil would be better than crude oil, as the latter is said to corrode the metal in the engines.

It is consequently improbable that, at the present stage of the question, Welsh coal will be superseded by liquid fuel for the propelling of merchant vessels.

Proceeding to refer to the petroleum trade of the port during the year, he says:—The price of petroleum, so useful to most people, and especially to the poor, is about 70 c. per litre, whilst its original cost at the custom house is about 13 c. per litre. Before 1864 petroleum was imported free, but that year a duty of 2 lire per 100 litres was imposed on refined petroleum; in 1866 it was raised to 6 lire; in 1871 to 9 lire; in 1872 the duty on raw petroleum was augmented from 5 to 19 lire, and on refined petroleum to 25 lire; in 1877 both duties were increased by 3 lire; in 1880 the duty on refined petroleum was brought up to 43 lire, and on raw petroleum to 27 lire; in 1887 a further increase on refined petroleum raised the duty to 47 lire, and on raw petroleum to 38 lire; and finally, in 1881, the duty on crude and refined petroleum reached 48 lire (£1 18s. 4d.) per 100 kilos., and at that rate it has continued till now.

The same duty is charged on benzine and other lubricating oils.

The American-Italian Petroleum Co. in this town has been placed in a most advantageous position by the concession that was granted them by the local authorities to build steel wells near the maritime station, to enable the oil to be discharged from the tank ships into the wells, and pumped out direct therefrom into the railway vans. The company has bought all the neighbouring ground to prevent competition, with the result that the concession, which the company has enjoyed for many years, is tantamount to a monopoly.

[An Italian lire equals one franc; a litre is .22 of an English gallon. - ED. P.R.]

THE PETROLEUM TRADE OF FORMOSA.

The British Consul at Formosa, in reporting upon the petroleum trade for 1905, says that of the 2,000,000 gallons of kerosene imported during the twelve months, one-fifth was in bulk, the rest being case-oil from America. The Shell Transport Co., who have a tank storage installation at Tamsui, are gradually extending their market, and, thanks to their tank waggons and tank boats, the natives are beginning to realise that bulk oil has its advantages. When the railway bridges are completed and the tank waggons can go right through and tap the southern part of the island, bulk oil should be able to compete successfully with the American product, more especially as it is said that means have been devised to render the lamps at present in use in Formosa suitable for the burning of Borneo oil, which, formerly, owing to its richness in carbon, was very smoky, and consequently unpopular.

The Use of Oil Engines for Marine Purposes.

The use of oil engines for marine purposes is considerably on the increase now that the claims of such engines are well known, and though in the REVIEW from time to time we have referred to this important subject, we deem the article which appeared in the last issue of *Engineering* of such general interest as to herewith reproduce it. The article in question deals with the uses to which the Diesel oil engine has been put in connection with marine propulsion, stating that while the producer gas engine consumes about a pound of anthracite or coke for each effective horse-power, the Diesel engine needs only 6.3 oz. of oil per effective horse-power. With regard to cost of fuel, therefore, the use of oil is cheaper unless the price reaches something like two and a-half times that of anthracite or coke. It is claimed, moreover, that in addition to being able to do without cumbersome boilers or even gas producers, the use of oil engines, owing to their smaller consumption of oil, allows of a greatly increased range of action over either gas or steam-driven vessels for the same weight of fuel. This is estimated at two and a-half times the distance run by a vessel fitted with producer-gas engines, and from four to five times the range of a steamship. The main trouble in the application of oil engines to moderate sized vessels arises from the fact that the engines are non-reversible, and this being so, any arrangements devised to overcome this disadvantage are worthy of special attention at the present time.

One of the most interesting features of the marine section at the Milan Exhibition is the four-cylinder, two-cycle, 100 brake horse-power reversible Sulzer-Diesel marine engine, built by Messrs. Sulzer Brothers, of Winterthur. The engine weighs five tons, and its outside dimensions are:—Length, 7 feet 6 inches; width, 3 feet 6 inches; and height 5 feet. The inlet is governed by valves, and the exhaust is through ports cut in the cylinders. The explosive mixture supply is governed by a piston pump, which is worked direct by the distribution shaft; the stroke can be regulated at will, or reduced to 0, while the engine is running. The pistons are plunger pistons, similar to those of ordinary explosion motors. The working is similar to that of the usual Diesel engine type, with the exception that an explosion takes place at every two strokes instead of at every four. After ignition and the corresponding explosion, the waste gases are scavenged through the exhaust ports. On the upward stroke of the piston, the contents of the cylinders are compressed to so high a degree that the explosive mixture, introduced almost at the instant when the piston reaches the upper dead-point, ignites immediately on its entrance into the cylinder. This occurs at each revolution. For reversing the engine, the explosive mixture supply is stopped, the engine is brought to a standstill, and is started in the opposite direction with the aid of a special re-starting device. At Milan, this takes three to four seconds. The distribution shaft is driven by worm-wheel gearing from the crank-shaft, and works the valves by cams. Of the two

pumps connected with the engine, one supplies the scavenging air, and the other that for the mixture. One is driven by a rocking shaft, and the other direct from the crank-shaft.

Another method of overcoming the difficulty of reversing is that of designing the propelling machinery as a combination of oil-electric set. The Messrs. Nobel Brothers, of St. Petersburg, put in service, in 1903, the vessel "Vandale," in which this form of propulsion is employed. This vessel is, as was stated in the REVIEW at the time, an oil-tank ship of 1,100 tons displacement, and is used in the oil trade on the Volga and the Caspian Sea. The machinery consists of three sets of three-cylinder Diesel engines of 120 effective horse-power each, working at 240 revolutions per minute. Each engine drives a direct-coupled 87-kilowatt dynamo, working at 500 volts. This part of the plant is placed amidships, and the current is laid by cables to three 75-kilowatt motors situated further aft, each motor driving a propeller-shaft. The regulation of speed is performed for each group by working off the exciter current, furnished by a small exciting dynamo driven by the main dynamo shaft. By this means rheostats are rendered unnecessary.

This system was found to be easy of control, and the vessel manoeuvred satisfactorily; but in view of the losses by an arrangement of this kind, which losses may amount to as much as 15 or 20 per cent., an improved system was designed by Mr. C. Del Proporto, and has been installed in a boat working on the Lake of Geneva, and also by Messrs. Nobel Bros., of St. Petersburg, on the "Sarmat," an oil-tank ship similar to the "Vandale." In this system the oil engine is placed further aft, and direct-coupled to a dynamo of about half the rated power of the oil engine. A motor, of power equivalent to that of the dynamo, is placed at the end of the propeller-shaft. Between the dynamo and the motor is an electro-magnetic clutch, the oil engine and dynamo-shaft being in alignment with the propeller shaft. The dynamo and motor are also coupled up for electric working. The action is as follows:—In starting or in manoeuvring, the clutch is cut out. Under these circumstances the oil engine drives the dynamo which generates power for the driving of the motor on the propeller shaft. In continuous running the motor and propellers are allowed to attain approximately the same speed as that of the oil engine and dynamo, and as soon as this point is reached the two machines are coupled together by means of the electro-magnetic clutch, and the electric transmission is cut out. By this means the losses due to the electric machines are done away with, and the armatures practically become fly-wheels. A small exciting dynamo is driven by the main engine shaft. In the "Sarmat" two propellers are provided, each worked by a set of four-cylindered 180 effective horse-power oil engines. The direct-coupled dynamos are of 125 kilowatts capacity, working 220 volts. The speed is 7.4 knots in the case of the "Vandale," while

the "Sarmat" attained a speed of 8.1 knots. This second system certainly appears to have many advantages over the first, even apart from the reduction of weight and less liability to break down. Since the electric portion of the plant is only used for short intervals, it is possible to overload the dynamo for this space of time without much harm. The machines can therefore be much reduced in size as compared with those of the system used in the "Vandale." The losses are much less in the second system, while if the electric part of the installation gets out of order, it is only necessary to couple the clutch by some mechanical means, and drive the screw direct. The power obtainable can be increased by arranging sets in tandem, when if one breaks down, the screw can still be driven by the electric motor deriving power from either generator set. It is anticipated that little trouble will be found in the installation of some large powered sets, at least up to 7,000 effective horse-power, while the system can be used for any sets developing over 30 or 40 effective horse-power—the limit for reversible propellers or gears. Three Diesel motors of 300 effective horse-power have been built for sub-marines in the French Navy; and even with engines of this size, by means of suitable grouping, combined plants of considerable power may be obtained.

THE FORTHCOMING PETROLEUM LAND AUCTIONS AT BAKU.

On November 1/14th, auctions will be held at Baku for the leases of the following petroleum plots situated in the Balakhany, Saboontchi, Ramany, and Bebe-Aibat fields:—

Field.	Number of Plot.	Area. Desatines.	Sq. Sags.	Minimum Annual Production on which Royalty is to be paid, in poods.	Total Wells to be Drilled in Six Years
Balakhany	.. 26	5	1,560	710,000	6
Bebe-Aibat	.. 10	4	2,340	1,990,000	5
"	.. 13	5	1,870	1,700,000	6
"	.. 34	3	1,045	1,370,000	3
"	.. 35	3	1,916	1,520,000	4
"	.. 36	3	1,980	1,530,000	4
"	.. 39	3	1,619	1,460,000	4
"	.. 40	3	1,980	1,530,000	4
"	.. 41	5	440	2,070,000	5
"	.. 42	3	1,980	1,530,000	4
"	.. 43	3	1,980	1,530,000	4
Saboontchi	.. 8	5	1,900	1,450,000	6
"	.. 9	5	940	1,350,000	5
"	.. 10	6	1,840	1,690,000	7
"	.. 11	6	1,950	1,700,000	7
"	.. 12	4	599	1,060,000	4
"	.. 16	4	240	1,030,000	4
"	.. 21	3	960	850,000	3
"	.. 28	3	1,080	860,000	3
"	.. 62	3	1,177	1,050,000	3
"	.. 63	3	1,205	1,050,000	4
"	.. 64	3	2,355	1,190,000	4
Ramany	.. 4	5	1,110	1,645,000	3
"	.. 14	2	1,530	790,000	3
"	.. 15	3	600	970,000	3
"	.. 16	2	720	690,000	2
"	.. 17	1	2,340	590,000	2
"	.. 25	3	1,440	1,080,000	4
"	.. 34	4	1,222	1,350,000	5
"	.. 35	3	2,332	1,190,000	4

All the wells have to be sunk to a depth of at least 1,400 feet unless oil in paying quantities has been struck before that depth is reached.

Out of the total obligatory number of wells to be drilled on each plot, two have to be completed within two years from the date of the handing over of the plot to the lessee. This is also the time limit within which the production of crude oil and the payment of royalty must begin. The rest of the wells must be completed within a further period of four years.

All buildings or other structures on the plot at the time of the conclusion of the lease will have to be removed by the holders of the surface leases, failing which they will revert to the Treasury. In the latter case, the new lessee can either acquire the buildings at a consideration to be mutually agreed upon, or have them removed within a period of six months.

The auction will take place by means of tenders to be sent in sealed envelopes. The tenderer must state the royalty which he offers, and which must not be less than 15 per cent. of the production for plots in the Balakhany field, 20 per cent. in Saboontchi, and 25 per cent. for plots on Ramany Lake and the Ramany and Bebe-Aibat fields.

The minimum production shewn in the table is not obligatory, but is merely intended to shew the minimum royalty payment which the lessee has to make. After the minimum annual royalty has been paid twelve times, further payments are to be made on actual production only.

Each tender must be accompanied by a deposit in cash, or first-class securities to the amount of one-third of the minimum annual royalty, calculated at 15 copecs per pood of crude oil.

The lease of each plot will be granted to the one who will offer the highest royalty, and should the same royalty be offered by more than one tenderer, the question will be decided by lot.

The royalty is payable in cash or in kind at the option of the Treasury. By agreement with the Treasury the royalty can be paid in residuals instead of crude oil.

Before the lease is signed, the lessee has to increase his caution money to one-half of the minimum annual royalty payment, and such caution money is to be held by the Treasury so long as the lessee holds the plot.

No royalty is paid on oil used as fuel at the oil fields. When the plot is worked exclusively by electric power supplied from outside, a certain portion of the crude oil production is allowed in accordance with the Government order promulgated on the 4th of August, 1905.

ROUMANIAN PETROLEUM EXPORTS DURING AUGUST.

The following are the official figures of the exports of petroleum products from Roumania in August, 1906, compared to August, 1905:—

Destination.	Crude oil, distillate, gas oil, etc.	Illum. oil.	Benzine.	Total.
Italy	—	8,827	—	8,827
Germany	21	—	5,736	5,757
England	5,757	—	—	5,757
France	301	5,166	—	5,467
Argentina	2,353	—	—	2,353
Turkey	183	1,639	—	1,822
Bulgaria	85	1,294	10	1,389
Belgium	92	—	—	92
Austria	—	—	12	12
Total, Aug., 1905 ..	8,792	16,926	5,758	31,476
" " 1906 ..	4,440	14,574	1,901	20,916

THE AURORA COMPANY OF ROUMANIA.

ITS HISTORY AND GENERAL POSITION.

Upon the occasion of the visit of the King of Roumania to the Pavillion of the Aurora at the Jubilee Exhibition at Bucarest, the following statement was presented to His Majesty concerning the history and present position of the company:—

The Aurora Co. was formed at Ploesti in 1898, with a capital of 150,000 francs. The founders were Messrs. G. G. Ionescu, A. Radovici, L. Elefterescu, M. I. Schapira, G. C. Dobrescu, S. Vasilescu, I. Niculescu-Bazar, I. Gheorghio, Christescu Brothers, and I. Diamandescu. All these gentlemen were also joint proprietors of the New Bustenari-Baicoi Pipe Line Co. The object of the Aurora Co. was to establish a refinery near Baicoi station to treat, in the first place, the crude oil produced by the above-named gentlemen at Bustenari, and in the second place to buy crude oil from other producers for refining purposes.

The considerable development which the business of the two companies has obtained attracted to them in 1899 the attention of a group of Dutch capitalists represented by Messrs. F. Olie and I. W. de Beer, and who had formed the International Roumanian Petroleum Co. The Dutch capitalists decided to take an interest in the two companies. The Aurora Co. was then reorganised, and its capital increased to 6,500,000 francs, of which half is paid up. The International Co. being owners of a producing property in the Dambovitza district, it was resolved that the Aurora Co. should purchase the refinery of Mr. N. T. Rucareanu, of Tergoviste. The refineries were reconstructed and their capacities enlarged, while a considerable number of tank waggons were acquired. In 1902, in order to find an outlet for the increasing output of the refineries and in order to facilitate the development of the export trade, it was decided to commence the construction of an export installation at Braila, which was completed in four months. At the end of May, 1903, the first tank steamer, the "Rock Light," was loaded there with a cargo of illuminating oil for England.

This installation, which included storage accommodation for 1,500 tons, pipe lines, railway facilities, etc., at the end of 1905 passed into the possession of the Credit Petrolifer under special arrangement.

In view of the continued growth of the company's export trade to the East, the directors last year agreed to rent, for a long term, two of the Government tanks at Constantza. By the geographical situation of Roumania the natural outlets for the company's products are Bulgaria and European and Asiatic Turkey. The first step towards the introduction of the company's oils on the eastern markets was the construction of a storage installation at Rustchuk in 1903, having a capacity of 1,500 tons. The oil is carried by rail to Giurgevo, and shipped across the river to Rustchuk on the tank barge "Aurora." The Rustchuk installation is provided with facilities for filling, soldering, and dispatch of cases.

The company owns two pipe lines. One runs from

Bustenari over Mislea and Baicoi to this refinery, with a branch to Baicoi station. It is 18½ kilometres long, and can deliver 150 tons in 24 hours. The other pipe line runs from Bustenari over Magureni and Floreshti to the Baicoi refinery; it is 16 kilometres long, and can deliver 30 tons in 24 hours. The following are the quantities of crude oil pumped by these pipe lines to the Baicoi refinery from 18th November, 1899, to 31st May, 1906.

		Tons.
From 18th Nov., 1899, to 30th April, 1900	..	10,515
„ 1st May, 1900, to 30th „ 1901	..	27,081
„ 1st „ 1901, to 31st Dec., 1901	..	26,956
„ 1st Jan., 1902, to 31st „ 1902	..	50,607
„ 1st „ 1903, to 30th June, 1903	..	24,638
„ 1st July, 1903, to 30th „ 1904	..	89,777
„ 1st „ 1904, to 30th „ 1905	..	94,007
„ 1st „ 1905, to 31st May, 1906	..	75,523
Total	..	396,104

The Baicoi Refinery of the company was constructed in 1898 with a distilling capacity of 60 tons of crude oil per 24 hours. At present the refinery, which has been reconstructed and provided with the latest improvements, is capable of treating from 800 to 900 tons per day. The refinery contains a continuous distillation plant, benzine rectifying plant, special apparatus for the manufacture of lubricating oils, storage tanks, etc. The refinery is connected with Baicoi station by means of a railway branch 1½ kilometres long, and sidings in all parts of the refinery.

The following are the quantities of crude oil distilled at this refinery from November 18th, 1899, to May 31st, 1906.

	Tons.
18th November, 1899, to 30th April, 1900	.. 5,304
Year ending 30th April, 1901	.. 16,247
8 months ending 31st December, 1901	.. 24,685
Year ending 31st December, 1902	.. 32,163
Half-year ending 30th June, 1903	.. 16,072
Year ending 30th June, 1904	.. 60,356
Year ending 30th June, 1905	.. 97,634
11 months ending 31st May, 1906	.. 119,772

The quantities of various products delivered from the Baicoi refinery during the same period were as under:—

	Illum. Oil.	Ben- zine.	Resi- duals.	Lub. Oil.
5½ months ending April 30, 1900	1,367	228	2,164	—
Year ending April 30, 1901	2,532	2,316	10,845	9
8 months ending Dec. 31, 1901	1,665	3,373	14,006	18
Year ending Dec. 31, 1902	3,294	5,245	25,233	89
Half-year ending 30th June, 1903	6,187	2,181	9,921	634
Year ending 30th June, 1904	14,912	8,742	32,962	725
Year ending 30th June, 1905	25,467	14,803	49,730	25
11 months ending 31st May, 1906	39,957	14,929	72,412	173

The company's other refinery near Tergoviste has been completely rebuilt and brought up to a capacity of distilling 150 tons of crude oil per 24 hours, while a modern plant for manufacturing lubricating oils was only completed this year. During the 11 months ended 31st May, 1906, there were treated at this refinery 22,445 tons of crude oil, whilst since 18th November, 1889, up to 31st May, 1906, the total quantity of crude oil treated has amounted to 74,809 tons.

The output of various products from the refinery during the 11 months ended 31st May, 1906, was:—

Illuminating oil 5,968 tons, benzine 1,692 tons, residuals 14,894 tons, other oils 950 tons. The total output of various products from 18th November, 1899, to 31st May, 1906, was:—Illuminating oil 17,090 tons, benzine 5,168 tons, and residuals 40,555 tons.

This refinery treats the crude oil from the Gura-Ocnitza and Moreni properties of the International Co., which is delivered by a 2-inch pipe line to Tergoviste station. This line will in course of the year be replaced by four pipes of 3-inch diameter and two kilometres length.

The storage accommodation owned by the company is as under:—At Rustchuk, two tanks of a capacity of 1,465,000 litres; at Bustenari, six tanks of a capacity of 3,198,900 litres; at Tergoviste, 43 tanks, holding 6,908,500 litres, and Baicoi, 38 tanks, holding 23,415,000 litres.

The number of tank waggons owned or rented by the Aurora has increased from 82 in 1900, to 283 at the present time.

The following dividends have been paid by the Aurora Co. during the last six years:—

	Per cent.
1899-1900	5.5
1900-01	5.47
1901-02	9
1902-03	5.4
1903-04	7.87
1904-05	6

LATEST REPORT FROM THE GROSNY FIELD.

A report from Grosny dated September 17th, says work at the oil fields there was proceeding in a normal course. The labour agitation appears to have entirely subsided, but the troops, nevertheless, remain on the spot. Notwithstanding the disturbed conditions which have prevailed this year, the work of equipping new properties is proceeding with greater energy than in the preceding years. The development work is carried on principally in the central part of the field, which hitherto was the least developed. Apart from the Akhverdoff spouters, which flow intermittently, there are no other spouters. The technical committee for preservation of the oil fields exists only on paper, and does not shew the least signs of activity.

Application has just been made to the Government for permission to hold the Annual Conference of the Grosny Petroleum Association, which now can scarcely take place before November.

BAKU PRODUCTION FOR THE FIRST HALF OF SEPTEMBER.

The production of crude oil at the Baku oil fields during the first half of September amounted to 16,800,000 poods.

A Venango Gusher.—The Wanango Oil Co. has recently encountered one of the old time gushers in the Venango field. The well at first yielded 100 barrels daily, but now is doing double that quantity. In that locality the rule has been the striking of very poor wells, but it is now thought that the Wanango Oil Co.'s new well touches the fringe of a very prolific new American field.

PETROLEUM PRODUCTION IN ROUMANIA.

STATISTICS FOR JULY.

According to preliminary statistics now to hand the production of crude oil in Roumania in July and the final figures of the production in June were as follows:

	July. Tons.	June. Tons.
Prahova District—		
Bustenari	44,137	42,519
Campina-Poiana	9,759	9,964
Moreni	—	11,578
Baicoi-Tinta	4,509	5,439
Other Fields.. .. .	614	422
Total for Prahova	59,019	69,922
Dambovitza District	526	1,512
Buzeu	1,146	1,024
Bacau	742	572
Total	61,433	73,030

The production of the firms who have not yet published their returns for July may be estimated at 12,000 tons, which will bring the total July output up to about 73,500 tons. The output in July, 1905, was only 51,210 tons.

The production of the leading firms in Roumania in July as compared with June was as under:—

	July. Tons.	June. Tons.
Steaua Romana	26,319	23,504
Bustenari Co.	10,876	11,088
Campina-Moreni Co.	221	9,875
Telega Oil Co.	3,764	3,952
Romano-American Co.	3,569	3,717
International Co.	3,276	3,470
Moreni Co.	—	3,150
Trajan Co.	1,771	1,792
Aquila Franco-Romana	1,272	1,067
Colombia Co.	1,112	1,054
Gallo-Romana Co.	569	1,020
Arnheemsche Petroleum Co.	1,050	1,088
Grigorescu ond Vladescu	740	910
Stanescu and Ginglescu	631	823
Secoleanu Bros.	933	733
Olandeza Romana Co.	701	719

RUSSIAN PETROLEUM EXPORTS.

SIX MONTHS' STATISTICS.

The exports of petroleum products from Russia during the first six months of 1906, compared to the corresponding period of 1905, were as under:—

	Six months, 1906.	Six months, 1905.
Illuminating Oil and Benzine—		
Total	11,845,000	26,322,000
Including—		
Via St. Petersburg	223,000	191,000
„ Warsaw	87,000	109,000
„ Remy	105,000	210,000
„ Novorossisk	1,882,000	7,774,000
„ Batoum	9,283,000	17,052,000
„ Baku	463,000	757,000
To Finland	346,000	365,000
Lubricating Oil Distillate—		
Total	3,546,000	2,142,000
Including—		
Via St. Petersburg	94,000	50,000
„ Riga	36,000	25,000
„ Sosnowice	93,003	37,000
„ Batoum	3,277,000	1,998,000
To Finland	3,000	2,000
Refined Lubricating Oil—		
Total	652,000	2,573,000
Including—		
Via St. Petersburg	67,000	145,000
„ Riga	127,000	134,000
„ Odessa	16,000	7,000
„ Batoum	203,000	1,960,000
To Finland	31,000	13,000

FROM KANSAS TO THE GULF OF MEXICO.

A PRACTICAL SCHEME TO RELIEVE THE PRESENT
CONGESTION.

The Standard Oil Co. is now busy attempting to solve the great question of the day for the producers of the Mid-Continental fields. Production has been going up by leaps and bounds, until now, in spite of the erection of storage tanks day and night, a glut of production of a most pronounced nature is being felt. We touched upon the matter in our last issue, then pointing out that in order to alleviate the situation, the producers were closing down the wells for a time, so that much of the surplus oil could be marketed.

The transporting branch of the Standard—the Prairie Oil and Gas Co.—has now inaugurated daily shipments of Mid-Continental crude oil to Texas, 1,000 barrels being now removed every day for treatment at one of the Corsicana refineries. The oil thus taken is gathered from the Tulsa district, embracing the southern part of the Cherokee and the northern part of the Creek nations, the bulk of it being supplied from the famous Glenn pool. The initial shipments are small, but we gather that they will be increased as rapidly as facilities can be provided and the exigencies of the situation will permit. It has been all along apparent to the intelligent producer that the production of this field must eventually be marketed *via* Texas. The shortage in the Gulf Coast region has been steadily increasing for months, until, today, it has assumed very large proportions. That the surplus in the Mid-Continental fields can be used to make good the Texas shortage is plainly apparent, so that the announcement that the Standard Oil Co. is already preparing to build a pipe line to the gulf will occasion no surprise to those who have followed the trend of recent events. The matter is so far advanced that the *Bartlesville Examiner* learns that the construction of the new pipe line will be started early in the coming year. The daily production of the gulf region in August was 55,000 barrels, and the daily consumption was 87,000 barrels—a shortage of 32,000 barrels a day. Texas could use that amount of crude oil to advantage, and thus take care of the present surplus in the Mid-Continent field, and it is merely a matter of time as to when the northern surplus will go to make good the southern deficit.

BATOUM PETROLEUM SHIPMENTS.

The shipments of petroleum products from Batoum for the week ended September 16th (o.s.) were as follows:—

	Illuminating oil.		Other products.	
	1905.	1906.	1905.	1906.
To Europe	287,000	401,000	537,000	390,000
To the East	4,000	190,000	2,000	—
To Russian Ports	—	—	12,000	4,000
From Jan. 1st to				
Sept. 18th:—				
To Europe ..	16,338,000	9,764,000	7,253,000	6,064,000
To the East ..	8,446,000	5,120,000	307,000	45,000
To Russian Ports	2,210,000	2,257,000	171,000	180,000

RUSSIAN AND ROUMANIAN
NOTES.

Mr. Urbanovitch, manager of the Ogulevitch property at Bebe-Aibat was assassinated on the 5th inst. The deceased had previously received threatening letters.

Duty Free to Persia.—The Russian Ministry of Finance has decided to permit the export of kerosene to Persia, *via* Krasnovodsk and Beumbash, free of excise duty.

Success at Mislisora.—Wells Nos. 5, 6 and 7 of the Colombia Co. at Mislisora have reached the oil stratum. The output has not been determined yet, but will probably be very considerable.

The Italo-Roumanian Co.—At an extraordinary general meeting of shareholders of the Italo-Roumanian Co., held on the 1st October, the scheme of the arrangement with the Telega Oil Co. was approved.

The Bitum Company.—The newly-formed petroleum concern, called the Bitum Co., has commenced drilling at a locality called Kamishbashi, in the Kokand district of the Ferghana Province of Russian Turkestan.

Prolific Roumania—Messrs. Ruzicka, Elias and Tanlies are now sinking wells on a tract of land acquired by them at Panlesti, in the Prahova district. There is every indication of oil being struck there in large quantities.

Messrs. Nobel's Manager shot.—Nobel's manager at Batoum, Mr. Gager, who was also the Swedish Vice-Consul, was shot dead on the morning of the 2nd October, when on the way to his house, situated outside Batoum.

The Ragatal Roman Co.—The first meeting of the directors of the Ragatal Roman Co. was held on the 24th September, Mr. C. R. Mircea, formerly general manager of the Campina-Moreni Co., now amalgamated with the Ragatal Roman Co., was appointed managing director of the last-named company.

Tenders Wanted.—The Moscow-Kursk-Nijni and the Murom railways have invited tenders for the supply of 3,000,000 poods of liquid fuel, to be delivered at Nijni-Novgorod. The competing firms were Nobel, Mazout, and Assadulaeff. Nobel offered the lowest price of 50 copecs per pood.

Bebe-Aibat Bay.—The Russian Ministry of Industry and Commerce has agreed to an advance being made to the executive for draining a portion of Bebe-Aibat Bay, out of the deposits paid by the intended lessees, a sum of 50,000 roubles to be paid out in premiums for the best schemes for draining the bay.

New Consumer for Liquid Fuel.—The Obukhovsky Engineering Works in St. Petersburg, belonging to the Government, has adapted certain of its department to burn liquid fuel. Beginning from the 1st of October these works will require 100,000 poods of oil fuel per month. The management are now prepared to consider offers from suppliers.

Fuel Contracts.—On August 31st contracts were given out by tender by the Moscow-Archangel and Jaroslav railways for the supply of 1,300,000 poods of liquid fuel, to be delivered during 12 months at Jaroslav. Three firms, Nobel, Mazout Co., and the Eastern Transport Co. all offered 50½ copecs per pood, and the contract was split up among them, Nobel getting 400,000 poods, Mazout Co. 500,000 poods, and the Eastern Co. 400,000 poods.

PARAFFIN WAX AND OILS.

TECHNICAL MAN with large experience in refining paraffin wax, and also the distillation and refining of illuminating and lubricating oils, requires suitable appointment, either at home or abroad. Apply in first instance "Chemist," c/o "Petroleum Review," 45, St. Mary Axe, E.C.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	1 ¹ / ₈ -1 ¹ / ₈
Baku Russian Petroleum ..	£750,000 Ord.	£1	3/3-3/9
	£650,000 5 ¹ / ₂ % Pref.	£1	5/9-6/3
Bibi-Eybat Petroleum Co. ..			7/6-8/6
Californian Oilfields ..	£250,000 Ord.	£1	5 ¹ / ₂ -5 ¹ / ₂ xd
European Petroleum ..	£550,000 Pref.	£1	1/6-2/6
"	£550,000 Ord.	£1	0/6-1/6
"	£376,000 Deb.	£100	82-85
Russian Pet. & Liquid Fuel ..	£500,000 6 ¹ / ₂ % Pref.	£1	11/0-12/0
	£600,000 Ord.	£1	10/0-11/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	2 ⁵ / ₈ -2 ⁷ / ₈
	£575,000 Ord.	£1	7/6-8/6
Shell Transport & Trading ..	£2,000,000	£1	30/0-31/0
"	£1,000,000 Pref.	£10	9 ³ / ₈ -9 ⁵ / ₈ xd
Spies Petroleum Company ..	£312,500	10s.	7/3-7/9

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on October 8th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	473	478
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,175	4,250
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	142	144
Neft Co.	250	—	—
Nobel Bros.	5,000	8,500	8,600
"	250	415	—
Rops and Co., V... .. .	250	—	—
Russian Naphtha Co.	250	—	—
Society Mazout	250	—	—
Tumaleff & Co., J. G.	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" (Second Issue)	250	—	—

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., telegraphing from the Quarterly Meeting of the Iron and Tin Plate Trades, held at Birmingham, Thursday, the 11th inst., report:—

Prices very firm. We quote for oil sizes to-day as under, according to time of delivery.

1c 18 ³ / ₄ × 14	124 sheets	110 lbs.	14/3 to 14/6	per box.
1c 19 ¹ / ₄ × 14	120 "	110 "	14/3 to 14/6	"
1c 20 × 10	225 "	156 "	20/- to 20/3	"

F.o.b. Wales. Tin lining and iron hooping extra.

The Berekei Concession. — Mr. A. Messner and G. Tchernitzky have now received the documents for the concession granted to them on Plot No. 134 at Berekei, having an area of 10¹/₂ acres.

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8 ¹ / ₂ pd	£199,750	£10	21 ⁵ / ₈
Do. 6% Cum. Pref. ..	£100,000	£10	12 ³ / ₄
Burmah Oil, Ord.	£1,100,000	£1	59s. 9d.
Do. Pref.	£250,000	£1	26s. 0d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8 ¹ / ₂
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	45s. 0d.
Do. New (£8 10s. pd.)	£131,750	£10	43s. 9d.
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	6 ¹ / ₈
(17s. paid)			
Do. 6% Cum. Pref. ..	£100,000	£10	12 ³ / ₄
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	37s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	73s. 9d.
Do. "B" Deb...	£150,000	£100	162 ⁵ / ₈

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij ..	65	65	1,000
Aurora (Deb. 5%)	94	92 ¹ / ₂	—
Campina Poiana Mij... ..	18 ¹ / ₂	18 ¹ / ₂	—
Dordtsche Petroleum Mij. (Pref.) ..	128 ¹ / ₂	127 ³ / ₄	500
" (Deb. 4 ¹ / ₂ %)	102	101 ¹ / ₂	1,000
Elzasser Petroleum Mij.	2	2	1,000
Gaboes	—	19 ³ / ₄	—
Holl. Rumeensche Petroleum Mij...	36	34 ¹ / ₂	1,000
Int. Rum. Pet. Mij.	109 ¹ / ₈	100 ¹ / ₂	500
Java Petroleum Mij. (Ord.) ..	—	—	1,000
" (Pref.) ..	—	38	—
Koninklyke Nederl. Pet. Mij. Shares	742 ³ / ₄	762 ¹ / ₂	250-1,000
" Share certificates	743 ³ / ₄	761	1,000
Mœara Enim Petroleum Mij. ..	134 ³ / ₈	138 ¹ / ₂	100
" 1-1,000 Oblig. 5	101 ¹ / ₈	101 ¹ / ₈	250-1,000
" Moesi Ilir " Petroleum Mij. ..	42	42	—
Nederl.-Rumeensche Petroleum Mij.	—	17 ¹ / ₄	—
Nieuwe Ned. Petroleum Mij. And...	—	55 ¹ / ₄	1,000
Oliebronnen in Hannover Mij. ..	135	150	—
" (Deb. 5%)	98	98	—
Panolan Maatschappij Cert. ..	355	350	—
Perlak Petrol. Mij. (6% cum pr A.) ..	140 ³ / ₈	140	1,000
" (Common) ..	118	118 ¹ / ₂	—
Sumatra-Palembang Petroleum Mij	79 ⁵ / ₈	79 ³ / ₈	50
Zuid Perlak Petrol. Mij. (Pref.) ..	107	98	—

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SATURDAY, OCTOBER 13TH, 1906.

AN IMPORTANT MOVE.

WHEN the Consolidated Petroleum Co., Ltd., was formed in London, now some six or seven years ago, I had the opportunity of accompanying one of the company's members and inspecting the fine suite of offices which had been leased in Rood Lane, and during this tour I was somewhat amazed to find in the board-room the ordinary oblong table which one is so accustomed to see in such a sanctum had been superseded by one of octangular shape—it had eight distinct corners. At the time I was impressed with this rather strange-looking table—in fact, I was so impressed that I remarked to the gentleman who was conducting me round that so many corners struck me as a sign of weakness. There may have been much jest in my remark, but the

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events which have since transpired have certainly justified it, for to-day I find that the Consolidated Petroleum Co. is about to lose its individuality.

In order to thoroughly grasp how this has been brought about, it is necessary that I should carry my readers back not only to the formation of the Consolidated Petroleum Co., but to the history of its forerunners, and thus trace from the beginning the marketing and distribution of Russian oil upon the English markets.

It was in the early eighties that Messrs. Lane and Macandrew bought a cargo of Russian oil from Messrs. Nobel Bros. for the English market, but being unable to make permanent arrangements with that firm for future supplies, they entered into an agreement with Messrs. Rothschild, of Paris, by which they secured the exclusive right to import into this country that firm's illuminating oil to the extent of 2,000,000 or 3,000,000 poods per annum. For this purpose Messrs. Lane and Macandrew formed a company under the title of the Kerosene Co., which was registered in April, 1888, with a capital of £300,000. Unfortunately, for this concern, instead of creating its own organisation for the storing of its oils in this country, it formed two entirely separate companies; one a steamship company for carrying the oil in bulk, and the other the Tank Storage and Carriage Co., for the purpose of storing and distributing the oil in England. As I have said, the companies were all separate, and the interests of the shareholders in each concern were by no means identical, and consequently by reason of one company striving against the other for profits, rocks were soon encountered, and the course was by no means clear.

Shortly after the formation of the Kerosene Co., Messrs. Nobel Bros. appointed Messrs. Bessler Waechter as their agents to sell their oils in the English market, and so a fierce competition was waged by the two distributing agencies—the one representing Rothschild, and the other Nobel.

As may be imagined, the result was disastrous to the progress of the Russian petroleum trade in this country, while the prices realised brought great losses to both firms, and so it was with a view to improving matters in connection with the concern with which he was so closely connected, that in 1890 Mr. Frederick Lane, who had been associated with the Russian oil trade from the time the earliest shipments were made, urged that the Kerosene Co. should endeavour to increase consumption by carrying out the distribution of Russian oil in the manner we are now so familiar with—by means of road cars. Whether it was the insufficiency of capital at the disposal of the Kerosene Co. or the conservatism of Mr. Lane's co-directors, I cannot say, but the fact remains that he did not succeed in inducing them to adopt the up-to-date methods which ultimately spelt success in other directions; and so he finally relinquished his position, and joined the Rothschilds in a new company which was created under the title of the Anglo-Caucasian Petroleum Co., and which was registered in 1897. This concern, to its credit be it said, was the first to adopt Mr. Lane's ideas in regard to the distribution

of the Russian oil by road cars, and it most naturally followed that Messrs. Bessler Waechter—Messrs. Nobel's agents in this country—suffered to a great extent owing to the fact that they had no organisation at their back in England through which they could go and do likewise. But they met the onslaughts upon their own interests as best they could. They began a war of prices and almost from the very day the Anglo-Caucasian Co. was formed, enormous sums of money were lost in the distribution of Russian oil in England—losses of course which must have been keenly felt by the exporting firms of Messrs. Rothschild and Nobel. At last, however, the foolishness of the continuance of such a policy was so apparent to both sides that it was arranged that an amalgamation of interests should take place, and so in 1900 the Consolidated Petroleum Co., Ltd., was duly registered with an issued capital of £350,000. In the new amalgamation of interests, not only were the Rothschilds and Nobel represented, but Messrs. Bessler Waechter formed part of the company by holding over £100,000 of shares, or practically 30 per cent.

Thus from the commencement, the germs calculated to breed disaster and unpleasantness, were to be seen in the Consolidated Co. Messrs. Rothschild and Nobel were both very large producers of crude oil in Baku, and consequently, they were both as equally interested in finding an outlet for their surplus refined oil in the foreign markets, and so to them, since a foreign market had to be found, it was a matter of some secondary importance whether this surplus yielded that profit which under other circumstances might be expected. Even if the surplus oil were marketed at a loss, that was considerably better than keeping it on the home markets, for there it would mean a reduction of the local price, and so re-act upon their chief source of profit. Messrs. Bessler Waechter, on the other hand, occupied quite a different position. They had not, nor have they now, any interest in the production of oil or in its refining. They were merchants purely and simply, whose profit could only be derived from buying oil at one price, and selling it at an enhanced figure—a principle certainly based upon common sense.

A combination of such diametrically opposed interests, was bound, sooner or later, to be the cause of some friction, and, as events have turned out, it created "corners," of which the board table was a striking emblem.

In the new organisation, however, to which I have already referred, Messrs. Bessler Waechter's interests will be entirely eliminated, and they will secure a fair consideration for parting with their interests acquired years ago, and which, it must be admitted, have been faithfully carried out. With their departure an entirely new chapter in the history of Russian oil upon the English markets will be commenced, and it occurs to me that the principles which have been laid down by the Standard Oil Co. some years ago, of acting as the one medium between the producer and the consumer, will finally be recognised and introduced all the world over.

In the previous issue of the REVIEW I referred to the fact that the "Shell" company is about to retire from the European business, in which it has been acting as merchants only, and now the very same reason applies to the retirement of Messrs. Bessler Waechter, for the trend of events is certainly in the direction of organisation, whose hands stretch direct from the oil wells themselves to the consumers. The day for the middleman in the petroleum trade is fast passing, and this recent move suggests to my mind the dawning of a day when there will be a universal recognition of the principles introduced by the Standard Oil Co. The proper distribution of oil on the consuming markets necessitates the adoption of such extensive and at the same time expensive facilities, that the producers in the various countries must recognise that it is considerably to their advantage to amalgamate in order to refine, export, and distribute their oil upon the world's consuming markets in an economical and successful manner.

So far as I can understand, the new central organisation will represent certain classes of producers in Russia and Roumania, and may-be Galicia.

This being so, then I for one are bold enough to prophecy that its future will be one of great success, and by its very being, the Continental petroleum industries will most materially benefit. Thus the sequel to the eight-cornered table will be of immense advantage to all concerned, the producer, refiner, distributor, and consumer.

P. DVORKOVITZ.

THE INTERNATIONAL BORING COMPANY.

The International Boring Co., of Ekelenz, Germany, who have important interests in the petroleum industry in Germany, Roumania, and other countries, have just published their balance sheet for the financial year 1905-6. The results shewn therein have exceeded the most optimistic expectations. The gross profit is 18,338,114 marks, against 3,000,000 marks in the preceding year. The amount written off for amortisation of property and plant is 3,834,850 marks, against 430,753 marks in the preceding year. The net profit is 14,503,263 marks, against 1,332,785 marks. The net profits are

applied in the following manner:—5,000,000 marks will be distributed as a dividend of 500 per cent., 1,083,402 marks is extra remuneration to the management; 120,000 marks remuneration to directors; 700,000 marks to reserve fund; 250,000 marks to plant renewal fund; 1,000,000 marks to create a workmen's and employes insurance fund and 900,000 marks as extra remuneration to employes and workmen. The balance of 6,149,861 marks is carried forward to next year's account.

This enormous profit comes from the renting of 250 plots of coal fields in Westphalia, on the left bank of the Rhine, to the Rheimsch-Westphalsche Bergwerks Gesellschaft, at the price of 35,000,000 million marks, of which 15,000,000 were paid on the 1st October, 1905, as well as from the sale of the coal lands in Westphalia and of a certain number of Kali plots, for which 10,000,000 marks were realised. The coal fields in Lorraine were sold to the International Kohlenbergs-Gessellschaft; the proceeds of this sale will figure in the accounts for 1906-7.

MESSRS. LIVETT FRANK AND SON'S BUSINESS.

The well-known firm of Messrs. Livett Frank and Son, of Borough High Street, has recently been formed into a private limited company with a capital of £65,000, of which 35,000 are five per cent. preference. The business of Messrs. Livett Frank and Son is of an old-established and highly-successful nature, and, as our readers are aware, is that of oil merchants and refiners, paint, grease and varnish manufacturers, as well as of ship chandlers, sail and tarpaulin makers, and ship-builders, being carried on at Borough High Street, Victoria Docks, the Royal Albert Docks, and also at Southampton. The first directors are Mr. F. Frank, Mr. R. Frank, and Mr. H. G. Frank, the former gentleman being permanent director and chairman.

AMERICAN PATENT.

Oil-Filter.—Joseph B. Bell, St. Louis, Mo.

An oil-filter, constructed with a receptacle, a plate removably arranged in the top thereof in the centre of which plate is formed a depression, a filtering-bed in basket form carried by said plate and extending downwardly into the receptacle, a tube extending downwardly from the depression in the plate through the bottom of the filtering bed, a short tube through the bottom of the filtering bed, an outlet in the lower end of the receptacle, and a flexible tube from the short tube to said outlet.

DETAILS OF BAKU PRODUCTION AND BORING IN JULY, 1906.

The latest issue of the *Neftiannoie Dielo* contains the following details of the production of crude oil at the Baku oil fields in July:—

						PRODUCTION (in poods).				Average per Well per Day.			
						By Baling.	By Spouters.	Casual.	Total.				
						Number of Wells in Exploitation.							
Balakhany	..	..	..	..	..	571	4,162,485	—	2,719	4,165,204	338
Saboontchi	..	..	..	..	..	403	7,409,345	—	71,465	7,480,810	814
Ramany	..	..	..	..	..	158	5,930,494	—	43,437	5,973,931	2,014
Bebe-Aibat	..	..	..	..	..	104	4,940,323	150,000	—	5,090,323	2,080
Total in July, 1906						1,236	22,442,647	150,000	117,621	22,710,268	843
Total in June, 1906						1,502	37,945,955	216,200	297,423	38,459,578	922
Total in July, 1905						1,556	46,176,277	1,842,300	322,407	47,438,184	1,060

Prospects of the Kerosene Trade on the Russian Home Market.

The riots, incendiary fires, and strikes, which have overwhelmed the Russian petroleum industry in recent times have reduced the output of oil to such an extent that fears are entertained as to the ability of the Baku industry to supply the Russian home markets with illuminating oil during the coming winter and spring season, until navigation opens on the Volga in 1907.

The annual consumption of kerosene in Russia may be roughly estimated at 53,000,000 poods. This figure is based on the following calculation:—

	Poods.
Stocks of kerosene on the 1st of April, 1904, at Batoum, Novorossisk and other places in Russia, exclusive of Baku and Grosny ..	16,500,000
Deliveries of kerosene from Baku and Grosny from 1st April, 1904, to 1st April, 1905 ..	146,700,000
	<hr/> 163,200,000

If we deduct from this quantity the stock on 1st April, 1905, 30,400,000 poods, and the export abroad, 84,000,000 poods, we find that there is left for the home markets 48,300,000 poods. To this quantity have to be added about 5,000,000 poods of kerosene produced out of Baku crude at refineries situated outside Baku and Grosny.

For the following year this calculation works out as follows:—

	Poods.
Stocks on 1st April, 1905..	30,400,000
Deliveries from Baku and Grosny ..	65,000,000
	<hr/> 95,400,000

Deducting the stocks on 1st April, 1906, 15,800,000 poods, and the export abroad, 32,000,000 poods, there is left for home consumption 47,000,000 poods; adding 5,000,000 poods produced at refineries outside Baku and Grosny, we get at a total home consumption of 52,600,000 poods.

The decrease in stocks of kerosene and deliveries from Baku have affected only the export trade in that product, which is continuously declining; the stocks in the interior intended for home consumption have not declined, nor was there any falling off in the deliveries from Baku to the home markets, as will be seen from the following comparative figures:—

	1904.	1905.	1906.
	In million poods.		
Stocks of kerosene on April 1st, at Batoum and Novorossisk ..	8.0	18.4	3.8
Stocks in the Interior..	8.5	12.0	12.0
	From 1st April, 1904, to 1st April, 1905.	From 1st April, 1905, to 1st April, 1906.	
Deliveries of kerosene from Baku:—			
For Export..	94.9	17.4	
For the Home Markets ..	48.8	47.6	

The Russian home market, therefore, consumes annually 53,000,000 poods of kerosene, which is made up as under: 3,000,000 poods of kerosene are produced at Grosny, about 5,000,000 poods are produced from Baku crude at refineries situated outside Baku, and 45,000,000 poods of kerosene are produced at Baku. The bulk of this quantity is shipped *via* the Volga during the navigation season; the smaller part is delivered all the year

round *via* Petrovsk-Rostoff and Batoum-Odessa, which regulates the supply in the event of the distribution of supplies among the various centres having been for some reason not completed during the navigation.

In view of the above it is necessary to find out how the 45,000,000 poods of Baku kerosene will be supplied to the markets of the interior between the 1st August, 1906, and the 1st April, 1907. The stocks on the 1st August were as under:—

	Poods.
In the Interior ..	32,400,000
At Novorossisk ..	400,000
„ Batoum ..	2,000,000
„ Petrovsk ..	600,000
	<hr/> Total .. 35,400,000

On that date there was also a stock at Baku of 5,200,000 poods.

The deliveries of kerosene from Baku for the home market up to the 1st of April, 1907, may be expected to be as follows:—

	Poods.
August, 1906 ..	5,200,000
September „ ..	3,000,000
October „ ..	2,000,000
November „ ..	1,000,000
December „ ..	800,000
January, 1907 ..	500,000
February „ ..	1,000,000
March „ ..	1,000,000
	<hr/> Total .. 14,500,000

Thus there will be available for the supply of the home markets up to the 1st of April, 1907, a total quantity of 49,900,000 poods of kerosene. The consumption of kerosene in the country during the same period, according to the experience of former years may be expected to be as follows:—

	Poods.
August, 1906 ..	2,900,000
September „ ..	4,500,000
October „ ..	5,400,000
November „ ..	6,800,000
December „ ..	6,500,000
January, 1907 ..	5,300,000
February „ ..	4,800,000
March „ ..	2,500,000
	<hr/> 38,700,000

Consequently, by the 1st of April, 1907, there will be left in the interior of Russia a stock of 11,200,000 poods of kerosene, which is about the same as it was on the 1st of April, 1905 and 1906.

Since on the 1st of August there was an available stock of over 40,000,000 poods of kerosene, which is more than sufficient to cover the needs of the consumers up to the 1st of April, 1907. The output and deliveries of kerosene from Baku, made subsequently, really went to make good the stocks in the interior, which are required for the purpose of regulating prices. There is, however, a practical certainty that the stocks will not be allowed to run right out. In August, notwithstanding the strike, the output of crude oil reached 26,300,000 poods, which quantity may be expected to yield about 7,000,000 poods of kerosene, while, for the future, a monthly output of 5,000,000 to 7,000,000 poods is also assured.

Having thus satisfactorily answered the question of the supply of kerosene for the Russian home markets in the coming season, we can easily explain the reason why



BARGES AT NIJNI-NOVGOROD.

the Czaritzin market, the principal kerosene market in the interior, fails to follow the lead of Baku in raising prices. Thus in May, June, and July, kerosene was quoted at Czaritzin at 90 copecs per pood, in the middle of August it rose to 96 copecs, and in September 1st fell again to 93 copecs; these correspond to net prices at Baku of 20, 26 and 23 copecs, whilst the actual market prices at Baku during the same period were 27, 30, 41, 36 and 30 copecs. On the markets of the interior, when supplied with their normal stocks of kerosene, prices cannot fluctuate so violently as at Baku, where the market is under the direct influences of temporary factors, such as strikes, etc. Any excessive advance in the price in the interior promptly brings about an increased offer from the stocks, and prices have to fall again to a normal level.

THE UNION OIL COMPANY OF CALIFORNIA.

THE PRESIDENT'S MESSAGE TO THE SHAREHOLDERS.

The stockholders of the Union Oil Co. of California have recently received the following circular letter from the President of the company—Mr. Lyman Stewart:—

“With the payment of the present dividend the amount thus far disbursed to stockholders now exceeds \$2,225,000.

“For your general information we beg to advise you that for more than a year a large amount of the company's production has been shut in, and its business consequently greatly restricted owing to the lack of water transportation. This condition is now in a measure relieved, and will soon be fully relieved. The steamship ‘Lansing,’ one of the six vessels which the company purchased last winter, is now in commission carrying oil on this coast, and the steamer ‘Santa Rosa,’ another of the vessels purchased, is now *en route* to this coast, and her sister ship, the ‘Santa Rita,’ is expected to be also *en route* westward within the next month. The aggregate carrying capacity of these vessels is nearly 150,000 barrels of oil. These, added to the fleet of vessels already in commission along the Pacific coast, will give the company very substantial relief.

“The large additions which are being made to the company's oil refinery at Oleum have been delayed through the unsatisfactory labour conditions which prevailed on San Francisco Bay, but are now nearing completion, and the works will in a short time be in full operation.

“The Isthmian pipe line is also nearing completion

[This has since been completed—ED., P.R.], and will provide an outlet for all the oil for which the company can provide water transportation. With these enlarged facilities for transporting and marketing oil, the company's wells, many of which have been shut in, can be opened, thereby very largely increasing the company's income.

“Notwithstanding the unsatisfactory market conditions which have prevailed, we are pleased to advise you that the company has many million barrels of oil sold for future delivery at satisfactory prices and assurance of the sale of many millions more through the Isthmian line and in South America at even more remunerative prices.

“The company has also secured by purchase the control of several thousand acres of rich oil lands in the Santa Maria and Fullerton oil fields. The general outlook, therefore, for the company's business, though always encouraging, is brighter.”

OPERATIONS OF ROUMANIAN REFINERIES DURING JULY.

The quantity of crude oil treated at the Roumanian refineries in July amounted to 65,939 tons. The output of various products was as under:—

	Tons.
Benzine	10,206
Kerosene and Distillate	19,547
Lubricating Oil	6,553
Residuals	27,294
Total	63,600

During July the following quantities of petroleum products were issued by the refineries for home consumption:—

	Tons.
Benzine	45
Kerosene and Distillate	1,724
Lubricating Oils	628
Residuals	21,432
Total	23,829

The total stocks of various products at the refineries on July 31st were as under:—

	Tons.
Benzine	16,841
Kerosene and Distillate	50,908
Lubricating Oil	23,811
Residuals	75,319
Total	166,879

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO OCTOBER 8th, 1906.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Sept. 24.	From Jan. 1.	Since Sept. 24.	From Jan. 1.	Since Sept. 24.	From Jan. 1.	Since Sept. 24.	From Jan. 1.	Since Sept. 24.	From Jan. 1.	Since Sept. 24.	From Jan. 1.	Since Sept. 24.	From Jan. 1.	Since Sept. 24.	From Jan. 1.
Austria ...	1,242,000	2,118,640	—	370,890	—	77,930	—	—	—	—	—	—	—	—	1,242,000	2,578,460
Belgium ...	—	370	18,552	393,408	—	11,000	—	—	—	5,300	—	—	2,099	4,985	20,651	404,063
Canada ...	—	—	—	25,460	14,000	56,400	—	—	—	—	—	—	—	200	14,000	82,060
Dutch India ...	—	480	960	960	192	192	—	—	2,635,000	11,152,410	—	1,010	1,920	1,920	2,638,072	11,156,972
Germany ...	6,180	5,100,790	55,283	1,115,463	—	—	—	—	—	2,380	—	—	72	16,162	61,535	6,235,875
Holland ...	—	10,180	—	2,920	—	9,440	—	—	128,843	1,412,673	—	271,000	5,120	63,840	133,963	1,777,773
Roumania ...	—	4,449,755	—	—	—	—	2,087,880	—	—	1,024,580	—	—	—	—	—	7,562,215
Russia ...	420,000	26,772,870	17,571	3,959,731	—	—	3,727,630	—	—	6,210	—	—	—	5,660	437,571	34,472,101
U.S.A. ...	831,025	71,164,505	1,224,633	31,019,181	126,075	669,168	34,426,318	—	—	6,844,200	—	9,072,430	47,028	1,265,094	2,228,761	154,450,806
Other Countries	—	1,370	782	30,812	—	—	—	—	2,000	4,130	—	—	680	214,410	3,462	250,722
	2,499,205	109,618,960	1,317,781	36,918,825	140,267	824,130	40,241,828	2,765,843	20,451,883	—	9,344,440	56,919	1,572,271	6,730,015	218,972,047	

AMERICAN PATENTS GRANTED.

Oil Pump.—Charles W. Manzel, Buffalo, N.Y.

A body having a longitudinal opening and a transverse oil inlet communicating with the longitudinal opening, a plurality of discharge valves in vertical alinement in the longitudinal opening, a suction valve at the junction of the oil inlet, and the longitudinal opening, and adapted to close the oil inlet and feeding mechanism.

Oil Well Pumping Power.—George H. Luther, Olean, N.Y.

In a power, the combination of a frame provided with the journal boxes and the bridge piece arranged between the boxes; a main geared wheel rotatively mounted on said bridge piece; a connecting means eccentrically mounted on said wheel; a drive pinion to mesh with said wheel; a shaft on which said pinion is mounted journaled in said boxes and extending under said bridge piece and by the centre of said wheel.

Derrick for Pumping Oil Wells.—Gurdon E. Keeler and Silas W. Genson, Haskins, Ohio.

The combination in a derrick for wells, of uprights connected at their upper and lower ends, and constituting a frame, a horizontally extending notched arm carried by said frame near its upper end, a hook carried by said arm and adjustable thereon, a pulley block carried by said hook, a second pulley block disposed below the first-named pulley block, a hook carried by said second pulley block, a pump rod engaged by said hook, sheaves carried by said frame, a cable passing over said sheaves and through said pulley blocks, pumping apparatus connected to said pump rod and means for operating the pumping apparatus.

Well Rig.—Samuel S. Strotman, Haynie, Pa.

A well rig comprising a drive wheel, a pulley and a driving connection therefor from the drive wheel, a reel, and means for shifting the pulley and wheel to slacken said driving connection, embodying a forwardly and rearwardly movable hand lever, a second forwardly and rearwardly movable lever in alinement therewith, a forwardly and rearwardly swinging member disposed oppositely to said second lever, for supporting between them the said pulley and reel, movable connections between said levers, said member having a supporting beam and provided with a movable brace, and also having at the ends thereof adjustable movable relation with said beam and brace respectively.

Pumping Apparatus.—Rudolph Conrader, Erie, Pa.

In a pumping apparatus the combination with a sucker rod having upset ends; of a sleeve surrounding the rod between the upset ends, the opening through the sleeve being smaller than the upset ends, said sleeve being provided with recesses.

Well-Drilling Machine.—Lovane S. Parsons, Waterloo, Iowa.

The combination with a frame, of the drive shaft mounted therein, a slidable sleeve on said drive shaft, a friction clutch adapted to be engaged by said sleeve, means for causing said sleeve to engage said friction clutch, a pinion and a friction wheel connected to said friction clutch, a drill rope drum mounted on a shaft in said frame, a shaft set parallel with said drill rope drum shaft and having one end mounted in a slidable bearing, a friction wheel on said shaft, gearing between said shaft and the shaft of said drill rope drum, a brake block attached to said frame, means for shifting the friction wheel on said movable shaft against or away from said brake block, a crank bearing-shaft mounted in said frame, a gear wheel on said crank-shaft intermeshing with said pinion, an anti-friction roller on said crank, a bifurcated lever pivoted in said crank and adapted to be reciprocated by said crank, a secondary lever, pivoted in said frame, a sheave thereon, a connecting rod between said levers, a slidable sheave in said frame, a mast in said frame provided with a sheave at its upper end, and a drill rope extending from said drum over said slidable sheave under the sheave on said secondary lever and over the sheave at the upper end of said mast, a sand bucket rope drum mounted on a shaft in said frame and having a friction wheel mounted on one end of said shaft, an idler wheel adapted to contact with the friction wheel on sand bucket rope drum shaft and to the friction wheel connected to the shaft of the friction clutch, a brake block adapted to contact with the friction wheel on said sand bucket drum shaft, means for forcing said idler wheel into contact with said friction wheels and simultaneously releasing said brake block, a transversely slidable sheave in the rear part of said frame, small sheaves in the top of said mast, and a sand bucket rope extending from said sand bucket rope drum under said slidable sheave and over and about the small sheaves set in the upper part of said mast.

BRITISH PATENT APPLICATION FILED.

Improvements relating to Oils and Greases, particularly for Lubricating purposes.—William Gordon Ross, London. No. 20540 of 1906.

A SIMPLE CALORIMETER FOR LIQUID FUELS.

In a recent issue of *Engineering*, Mr. Charles A. Darling, A.R.C. Sc. I., gives details concerning a number of modifications which he has recently introduced into a simple form of calorimeter designed a few years ago for solid fuels, in which the combustion was carried out in a stream of oxygen, and the bubbles of hot gas broken up by passing through the surrounding water. That method of dividing the hot gases into small bubbles (originally due to Mr. B. W. Wedmore) ensured that the gases were deprived of their excess temperature before leaving the water.

Hitherto, however, great difficulty has been experienced in carrying out the combustion of highly-volatile liquid fuels, such as petrol or alcohol. Heavy oils may be absorbed in Kaolin or calcined alumina and treated as solid fuels; but this treatment in the case of volatile liquids results in the formation of explosive mixtures in the combustion-chamber owing to the rapid evaporation caused by the heat generated on burning. The new modification enables this class of liquid fuels to be tested expeditiously and with reasonable accuracy without entailing much alteration in the calorimeter as used for solid fuels. The experiment is conducted as follows:—About 1 cubic centimetre of the liquid is placed in the lamp by means of a pipette, and the asbestos wick, fitted to a suitable nozzle, is inserted. The lamp and its contents are then weighed and placed in position in the clips; the cover is then placed over and screwed down so as to form a tight joint. A known quantity of water is placed in the outer vessel, and its temperature noted. By means of a pipette sufficient of this water is introduced into the combustion-chamber to surround the lamp, care being taken not to wet the wick. Ignition is commenced by lowering a lighted match, fixed into a piece of glass tubing, into the chamber, when the oxygen tube is rapidly inserted, and the whole immersed in the water in the vessel. The combustion is allowed to proceed until all the liquid is burnt, after which the calorimeter is raised, and the screws holding down the cover loosened, so as to permit the water in the interior to escape into the outer vessel. The screws are then tightened, and the calorimeter again submerged until the water shews a constant temperature, which is noted. The calorimeter is then lifted out, the cover removed, and the lamp dried with blotting-paper, and again weighed. The loss in weight is the amount of liquid burnt, and the calorific value is then found from the equation

$$\text{Calorific value} = \frac{(\text{Weight of water} + \text{water equivalent}) \times \text{rise in temperature}}{\text{Weight of liquid burnt.}}$$

BULK OIL AT MANCHESTER.

During September the tankers "Daghestan," "Kura," "Rion," and "Vedra," from Batoum, and "Weehawken" and "Snowflake," from Philadelphia, discharged an aggregate quantity of 20,000 tons of oil into the various tanks situated below Mode Wheel Locks, on the Manchester Ship Canal.

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR AUGUST.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during August were as under:—

		1905. Quantities. Gallons.	1906. Quantities. Gallons.
CRUDE—			
Baltimore .. ..	—	.. ..	—
Boston and Charlestown .. ..	—	.. ..	—
Delaware	4,439,704	.. ..	—
New York	268	.. ..	9,885
Philadelphia	326,000	.. ..	10,863,015
Galveston	1,681,026	.. ..	4,963,841
Total	6,446,998	Total	15,836,741
Total value for the month, 1905 .. ..	.. ..	.. ..	\$326,039
.. ..	1906 .. ..	.. ..	\$894,218
NAPHTHAS—			
Baltimore	2,500	.. ..	—
Boston and Charlestown .. ..	—	.. ..	—
Delaware .. ..	—	.. ..	—
New York	363,572	.. ..	213,859
Philadelphia	2,607,935	.. ..	652,143
Galveston .. ..	—	.. ..	—
Total	2,974,007	Total	866,002
Total value for the month, 1905 .. ..	.. ..	.. ..	\$199,865
.. ..	1906 .. ..	.. ..	\$102,699
ILLUMINATING—			
Baltimore	5,523,799	.. ..	—
Boston and Charlestown	70,921	.. ..	4,450
Delaware .. ..	—	.. ..	—
New York	50,969,661	.. ..	45,908,961
Philadelphia	24,647,566	.. ..	34,551,094
Galveston	380,786	.. ..	—
Total	81,592,733	Total	80,064,505
Total value for the month, 1905 .. ..	.. ..	.. ..	\$5,055,163
.. ..	1906 .. ..	.. ..	\$5,032,541
LUBRICATING—			
Baltimore	192,678	.. ..	175,665
Boston and Charlestown	8,195	.. ..	17,423
Delaware .. ..	—	.. ..	—
New York	6,443,050	.. ..	6,474,668
Philadelphia	2,188,150	.. ..	2,621,418
Galveston	5,062	.. ..	25,952
Total	8,837,136	Total	9,315,126
Total value for the month, 1905 .. ..	.. ..	.. ..	\$1,129,040
.. ..	1906 .. ..	.. ..	\$1,219,473
RESIDUUM—			
Baltimore .. ..	—	.. ..	—
Boston and Charlestown	22,500	.. ..	12,500
Delaware .. ..	—	.. ..	—
New York	4,300	.. ..	4,000
Philadelphia	4,388,481	.. ..	4,552,964
Galveston .. ..	—	.. ..	12,272
Total	4,415,281	Total	4,581,736
Total value for the month, 1905 .. ..	.. ..	.. ..	\$123,180
.. ..	1906 .. ..	.. ..	\$129,447
TOTAL MINERAL OILS—			
Baltimore	5,718,977	.. ..	175,665
Boston and Charlestown	101,617	.. ..	34,373
Delaware	4,439,704	.. ..	—
New York	57,780,851	.. ..	52,611,373
Philadelphia	34,158,132	.. ..	53,240,634
Galveston	2,066,874	.. ..	5,002,065
Total	104,266,155	Total	111,064,110
Total value for the month, 1905 .. ..	.. ..	.. ..	\$6,833,287
.. ..	1906 .. ..	.. ..	\$7,378,378

Texas Figures.—Humble continues to lead the Texas districts in production. At the middle of September it was producing 8,000 barrels daily, while Batson came second with 7,000 barrels. The daily production of Batson has remained stationary for some time, but that of Humble is on the decline. Saratoga is also doing about 7,000 barrels daily, Sour Lake 5,600 barrels, Spindle Top a little under 3,000 barrels, and Dayton figures with a couple of hundred barrels to its credit. The decrease, when compared with the total Texas output for August, is about 1,000 barrels daily.

AMERICAN NOTES

Reduction in Petroleum Freight Rates.—As a result of the efforts of the National Petroleum Association officials, the Arkansas State Commission has ordered the railways to cut the rates on petroleum and its products in carload and less than carloads 50 per cent.

A Good Well.—One of the best wells brought in in the Rays Run district of Washington county for many a month is the test on the Martha Hanlon farm, which during the first 24 hours produced over 1,000 barrels. The well has increased its production, according to the most recent dispatches.

Serious Oil Blaze.—A report from Toronto states that the warehouses of the Canadian Oil Co. at Toronto have been totally destroyed by fire, which was caused by lightning. In all, twelve storage tanks were burned, but fortunately the fire did not reach a tank in which 100,000 gallons of benzine were stored.

Oklahoma Oil for Texas.—The glut of production in the Mid-Continent fields is about to be removed, for the Prairie Oil and Gas Co. has completed arrangements whereby 1,000 barrels per day of the crude oil will be shipped in tank cars to a Corsicana refinery. The refinery is about 300 miles from the Mid-Continent fields.

Trade with the Orient.—Mr. W. H. Avery, whose name is so closely associated with America's trade with the Orient, inasmuch as he is the assistant general manager of the Toyo Kisen Kaisha Steamship Co., has recently arrived at San Francisco. Mr. Avery has been in the Far East for several months arranging for liquid fuel burning machinery for the company's vessels plying between the Orient and San Francisco.

Gulf Coast Production Declines.—The decline which has for some time been noticeable in the returns of production from the Texas-Louisiana districts continues, and from the figures now published in the *Oil Investors' Journal* of the production for the first half of September, it appears that another reduction has to be recorded. In the middle of the month the whole of the districts were producing 48,000 barrels, as against 51,000 the month previous.

A Deep Canadian Test.—The Canadian Pacific Railway is now about to enter upon one of the greatest undertakings in Western Canada, for it is to make a deep test to ascertain whether there is oil underlying the natural gas field there. The greatest depth that has so far been reached in that part of Canada is a trifle over one thousand feet, but the present effort is to go down 3,500 feet in order to find the oil. Machinery is already on the field, and work will begin as soon as possible.

The San Francisco Railway and Oil Fuel.—It is reported that the Tulsa division of the San Francisco Railroad is using two passenger locomotives in experimenting with Oklahoma oil. The first test is being made with residuum from the Standard Oil Company's refinery at Neodesha, while other tests will be made with low-grade crude. This railway has been using liquid fuel in its goods locomotives for over a year, the oil being supplied from the Standard Kansas City refinery, and this it has found very satisfactory.

The Reported Oil Strike near Chatham.—In our last issue we published some information from the *London Free Press* with reference to a well situated at a place known as Prairie Siding, in which it was stated that a good quantity of oil of a high grade had been found at a depth a little over 1,500 feet. As a matter of fact, the advices which have reached us since that time entirely contradict the striking of oil, while a correspondent in the *Petrolia Advertiser* goes as far as to say that salt water was encountered. The drillers came across no oil at all.

Heywood Oil Company's Dividend.—The Heywood Oil Co. has just paid its quarterly dividend, this time being \$5 per share held. In a note accompanying the dividend warrants, Mr. W. C. Tyrell, the President, says:—"This is the largest quarterly dividend ever paid by this company, and it is a matter of gratification to me that the affairs of the company are in such a prosperous condition as to warrant a payment of a dividend of this size. During the past quarter our production has been fair, while the market has been steadily advancing with still a strong upward tendency, which indicates another quarter of prosperity for the company."

MISCELLANEA.

GALICIAN PRODUCTION IN AUGUST.

The following are the official statistics of the production, deliveries, and stocks of crude oil in Galicia in August:—

	Production.	Deliveries		Stocks on 31st Aug., 1906.	
		Petrolea	Out-siders	Petrolea	Out-siders
Potok	1,210	345	1,571	3,124	2,438
Rogi	640	482	1,131	7,306	—
Rowne	145	—	59	—	285
Tarnawa-Zagorz-Wielopole	2,250	42	746	3,142	4,780
Krosno	2,400	—	741	6,936	6,624
Other West Galician fields	2,600	1,737	756	1,957	8,804
Boryslaw-Tustanowice..	44,270	39,893	20,400	290,460	68,211
Schodnica	4,250	4,503	3,962	15,020	11,424
Urycz	1,140	2,392	—	1,045	3,334
Mraznica	180	231	60	569	639
Other East Galician fields	1,020	—	760	—	410
Total	60,105	49,625	30,186	338,659	106,949

The quantity of crude oil used as fuel at the wells and loss amounted to 2,770 tons, of which 2,000 tons were at Boryslaw-Tustanowice. The total stocks during August decreased by 8,582 tons, while the stocks of the Petrolea Co. decreased by 48,057 tons, whilst those of the outsiders have increased by 38,923 tons.

DETAILS OF OPERATIONS IN BORNEO.

A GLUT IN PRODUCTION.

Statistical cables received by the Nederlandsch Indische Industrie en Handel Maaatschappij (London agency) from the fields in Borneo for the third 13 weeks and the first 39 weeks of the years 1906 and 1905 shew the following figures (in tons):—

	Third 13 Weeks.		First 39 Weeks.	
	1906.	1905.	1906.	1905.
Production of Crude Oil	75,770	91,485	283,390	282,575
Crude Oil Sold	8,405	2,800	8,405	33,839
Intake of Refineries ..	97,148	83,807	248,253	234,429
Output of Refineries—				
Kerosene	33,366	36,555	84,797	96,713
Other Products	54,223	38,611	139,666	113,861
Shipments—				
Kerosene	30,747	25,274	92,582	85,694
Other Products	53,384	46,235	122,167	113,498
Crude Oil in Stock above ground	..	..	30th Sept., 1906.	30th Sept., 1905.
Stocks Awaiting Shipment—				
Kerosene .. .. .	..	..	23,336	20,224
Other Products .. ..	..	..	20,643	10,624
Total Stocks of Crude Oil and Products			79,478	58,578

During the year 1906, due to large stocks on hand, the production of crude oil has been purposely kept low.

THE AMERICAN MID-CONTINENT FIELDS.

SUSPENSION OF OPERATIONS.

In the space of a month drilling operations throughout the producing districts of Oklahoma and Kansas have been completely suspended. In Indian Territory and Oklahoma at the present time not more than 35 wells are drilling, the few scattering prospect holes in out-of-the-way places not figuring in production calculations. In the shallow sand district of the Cherokee only 14 wells are drilling; in the deep sand districts between the Kansas line and Tulsa only seven are drilling; in

the Osage reservation six rigs are running, and in the Creek Nation eight will cover the new work. In Kansas not more than 20 wells are drilling, and most of them are for gas. When the great scope of the field is considered the small amount of work in sight is rather remarkable, even though conditions indicated it. In advance of the monthly report, present figures shew about 125 wells completed in Oklahoma, and about 40 in Kansas—the smallest number reported in three years. The new production will be much less, of course, although the majority of the wells are good producers, and many of them above the average. A careful estimate of production in Oklahoma shows 108,000 barrels a day, and 10,000 in Kansas. These figures will not now be increased, and the failure to drill more wells will cause all wells to drop off to a point where the pipe lines can handle the entire output of the field within a reasonable time.

LIQUID FUEL AND THE AMERICAN NAVY.

A REMARKABLE ANNOUNCEMENT.

An announcement that is of a remarkable nature has just been made in American oil circles with regard to the use of liquid fuel by the American navy. Up to the present it has not been officially confirmed, but, on the other hand, the departmental authorities at Washington have made no repudiation. The report is to the effect that after a year's trial of oil fuel on the torpedo boat "Gwin," the commanding officer of the reserve flotilla has recommended to the Navy Department that the "Gwin" be now fitted so as to burn coal instead of liquid fuel. He states that the best speed available with the oil fuel was about 16½ knots, while her sister boat running on coal obtained twenty knots.

This statement is all the more remarkable when it is recollected that after a twenty-eight months' experimenting with liquid fuel, the Fuel Board of the U.S. Navy Department two years ago reported that oil fuel was pre-eminently superior to all other fuels, both as regards economy and efficiency, and declared that its use in the navy would subserve the best interest of the nation's fighting craft from a scientific as well as from a material point of view.

JAPAN IMPOSES A PROHIBITIVE DUTY ON AMERICAN KEROSENE.

It is stated on good authority, says the *Pacific Oil Reporter* in its current issue, that the Japanese Government will, commencing with November 1st, impose a duty of 9 cents a gallon on all refined mineral oils imported into that country, and the Japanese themselves will purchase the crude oil in America, and refine it themselves in their own country under Government protection. The duty of 9 cents a gallon is prohibitive and intended to exclude American kerosene, which has been imported into Japan by the Standard Oil Co. for some time past in large quantities.

OUR AMERICAN LETTER . .

From
Our Own . . .
Correspondent.

PITTSBURG, *October 2nd*, 1906.

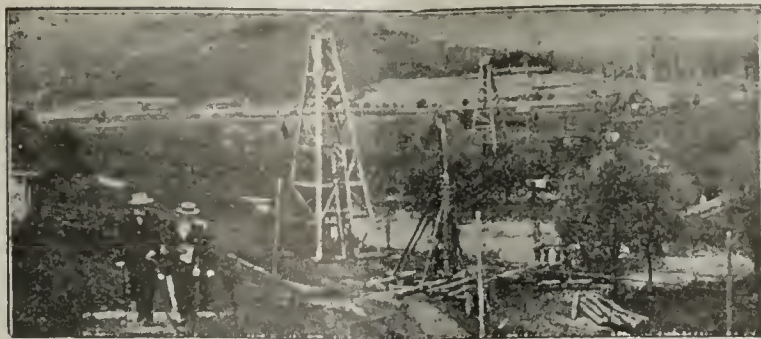
It is early for me to furnish readers of the REVIEW with the details of operations in the various fields for September which has just closed, but I have good grounds for believing that so far as high grade production is concerned, the month's work will shew up very well. Both in the Pennsylvanian fields and in the western territories there is considerable activity, though in the latter case the drill has shewn a tendency to stop except in cases where land lease agreements are to the contrary.

Developments in the lower south-west and south-eastern Ohio fields have been more interesting than for some time. On both sides of the river good producers have been drilled in and two at least might be classed as gushers. Had the big wells been drilled in new territory and shewed so much strength at the start they would have caused no little excitement. There would then have been some hope of opening a new pool and subsequent activity. New producing territory in the eastern fields is hard to discover, and the chances are that the year will close without any having been located. The efforts in that direction are not now so strenuous as in the early part of the year, and will, of course, now drop off with the advance of winter.

The Maxon sand producer in the Rays Run district, in Washington county, O., is certainly the best producer in the eastern fields. The well declined to a production of about 600 barrels and so the owners decided to drill it a little deeper into the Maxon sand, and it immediately responded by producing 50 barrels per hour, and for 24 hours placed 1,025 to its credit. From the time the well was drilled into the pay, when it began to flow with so much force, it has been a surprise to the operators in south-eastern Ohio. It was very generally expected that it would decline rapidly but it has done nothing of the kind. It has been nearly a fortnight since it was drilled in, and during that time it has probably averaged 900 barrels a day. This gives the impression that it is drawing from a pool of some dimensions, despite the fact that a dry hole was drilled within 600 feet of the gusher location.

With regard to West Virginia, the deep sand districts have recently been very much to the fore. It has been some time since the deep sand territory furnished anything better than light wells, but now in Marion county developments have once more reached a very interesting stage. New wells have been drilled into the producing sand, but yet not a sufficient depth to determine their capacity as producers. The location of the two wells which promise so well is important being in a bit of new locality, and consequently their completion is awaited with much interest.

Operations in the Clear Fork and Sycamore Valley districts have increased very much during the past two months. At the time of writing there is more work starting and under way than in the Woodsfield district. In the last named there is still some activity but the late



completions are light, and a few fall to make paying producers, or are total failures.

• In the north-west part of Monroe county, in the vicinity of Jerusalem, there is a revival of operations. Two months ago nearly all the wells completed in the district proved dusters, but of late better success has been attending development work. The work, however, is confined to the defined districts, and little or no effort making to discover new pools.

Turning to Illinois, where so many surprises have been in store during the past few months, the present outlook is for a shutdown, inactive operations all over the field, many of the large operators declaring that they will only drill where they are compelled to on leases that require wells to hold them. For the past few months the drill has been rushed, with no way to save the larger portion of the product, and thousands of barrels are going to waste. Had the operators never started the great activity until the pipe lines were ready to handle the product they would be in better shape than at the present time.

The pipe line and storage tanks are being rushed up and the Ohio Oil Co. has done more active work to care for the producers' crude in the Illinois field than in any other field in the country outside of the Mid-Continent field. This company has constructed nine tanks north a short distance from Casey, and put in four, six and eight-inch pipe lines to all the fields, and now have nine stock tanks completed at the Martinsville tank farm, with bottoms for a total of 48 tanks on the last-mentioned farm. All are being rapidly filled as fast as they can be completed and connected to the lines. Over 300 men are at work constructing tanks, and many more than that are at work on the trunk line from Martinsville to Montpelier. An eight-inch line has been completed to the Stoy pool, in Crawford county, and lateral lines are being laid from the main line to the wells of the producers as rapidly as the pipe and material can be got on the ground. The Ohio Oil Co. has for a long period shipped by tank cars an average of 21,000 barrels of crude per day at an enormous expense, but now the tanks will be taken from the Illinois field, and all the oil that can be cared for until the trunk line is completed and in shape to handle the product of the field is what can be put into storage on the Martinsville tank farm.

In the extreme southern end of the field, one and one-half miles south-east of Bridgeport, in Lawrence county, the Ohio Oil Co. has discovered a new producing formation on the Buchanan farm. This test was drilled through the regular producing formation for that locality, but failed to find production. It was drilled deeper, and at 453 feet below, or a total depth of 1,350 feet, got another producing sand, and it is reported that the well is good for 50 barrels a day. There is no pipe line into that part of the field, and the size of the well is purely guesswork. It is reported on good authority that the oil is superior to that found in the shallow formation in the same locality.

PETROLEUM PROSPECTS IN NIGERIA.

ACTIVE DRILLING PROCEEDING.

The prospects of striking petroleum in commercial quantities upon concessions covering an area of about 225 square miles in Nigeria were discussed at a meeting of the shareholders of the Nigeria Investment Co., Ltd., held on Monday, at Salisbury House, E.C.

Mr. H. J. Brown, the chairman of the company, presided, and in detailing the work that had been accomplished since the company was formed a few months ago, dwelt at length upon the favourable reports which had been received from Mr. Bernard A. Collins, the engineer who the company had retained to report upon the bituminous area in Nigeria. Mr. Collins left England for Nigeria on May 12th, and on the 15th of August he wrote:—

“I am pleased to be able to inform the directors that I have struck an area, the richness of which far exceeds anything that I have seen in the colony.” He added:—“In a small river, within 100 yards of the camp, there are waterfalls caused by bituminous shale, which, although it resists the action of the water, draws out in places into strings, shewing the large percentage of the bitumen.” He further says:—“In going through the bush during the past few days I have seen enough in all directions to warrant my stating that there are millions of tons of commercial bitumen in one square mile, and I have no hesitation in saying that petroleum will be found here also.” At the end of the letter he said:—“Under all circumstances I would advise the ordering of a 1,500 drilling plant (Keystone), and the engagement of a driller and assistant, as I am certain that oil will be obtained within a month or so after it has reached here.” On 19th August he says:—“We are now down 35 feet in rich bituminous shale, and there is every indication of our striking oil with this plant. When I get the men from Epi I will be able to do at least 10 feet a day in the shale, and if we get through I believe we will begin to get oil shows, for as it is oil floats on the sand pumpings.” On 20th August he writes:—“I feel certain that we are on the right spot for oil. The bed of shale is very thick—we are not through it at 35 feet—and the pumpings are

saturated with oil, no doubt from the shale. I am keeping the borings, and will send samples as soon as it is possible.” On 25th August he says:—“We are now on an area which I believe will prove to be a rich one in petroleum, and, as the log and section of the bore will shew, the favourable opinion created by the outcrops on all sides (in the water courses) is confirmed the deeper we go.”

From those extracts the chairman said they would see that, leaving aside the strong possibilities of finding oil, the bituminous deposits alone would make the company a commercial success. Mr. Collins had written asking for a Keystone drill, and this request the board had granted. The area that they were exploiting with Mr. Collins, Mr. Woodington and two other engineers was being examined with the idea of proving the bituminous deposit and locating spots which would be the most likely and most easily drilled for oil. When they had received the full report from Mr. Collins it was the intention of the directors to sell the rights that they had in Nigeria to a company to be formed in a similar manner to that in which another company was formed, taking over the rights that were held by other Nigeria syndicates last year. He thought if they were as successful in locating the oil as they had been in locating rich bitumen, they would have no difficulty in getting all the capital required for the exploitation of what he believed would prove to be one of the largest oil fields in the world.

A vote of thanks to the chairman for presiding concluded the meeting.

PRODUCTION OF DUTCH-INDIAN COMPANIES.

The production of the principal Dutch-Indian petroleum companies during the first month of 1906 was as follows:—

Royal Dutch Co...	.. Refined Oil	7,594,600 units.
Moesi-Illir Co. ..	.. ..	170,374 ..
Sumatra-Palembang ..	.. ..	341,500 ..
Dordtsche Petroleum Co. ..	.. ..	1,464,450 cases.
Panolan Co. ..	.. ..	451,317 ..
Perlak Petroleum Co. ..	.. Crude	169,902 tons.

The figure of the Royal Dutch Co. includes the output of the Sumatra-Palembang Co., and of the Moeara Enim Co.

Telegraphic Address:—“OLEINE.”

Telephone Nos.:—{ 249 & 254 LIVERPOOL.
1990 MANCHESTER.

MEADE-KING, ROBINSON & Co.,

11, Old Hall Street, LIVERPOOL, & 18, Exchange Street, MANCHESTER,

IMPORTERS AND DISTRIBUTORS OF

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THROUGHOUT NORTHERN AND MIDLAND DISTRICTS OF ENGLAND.

SPECIALITIES: All Grades of

GAS OILS, MINERAL LUBRICATING OILS, PARAFFIN SCALE AND WAX, PETROLEUM SPIRIT
BENZOLINE AND BENZINE, SWANSDOWN WATER WHITE AMERICAN PETROLEUM

The American Oil Market.

New York, Week ended Sept. 29th.

Nothing like the surprisingly large gusher reported during the preceding week rewarded the drillers in the older fields during this week, in fact, the reports from the producing districts have been rather tame. About the usual number of completions have been reported, and among these were some good wells, but no gushers, and the average production of the producing wells was rather low, the great majority of the wells being small pumpers. There was, however, a gratifying decrease in the percentage of dry holes, notwithstanding that considerable development work has been in progress considerably in advance of defined limits. Some extensions have been established, but none of special importance, and generally efforts in this direction have proved disappointing. The big gusher reported last week is believed to draw its oil from a pool of considerable extent, but other wells near by shew only average production. A number of new wells are being drilled in the immediate vicinity, says the *Oil, Paint and Drug Reporter*, and the extent of the pool will soon be determined. In Illinois the production continues very large, but is being taken care of by the pipe lines, and further expansions of the productive areas is expected. In the mid-continent fields the production amounts to about 48,000 barrels a day, but as the deliveries have increased to considerably over 30,000 barrels a day the additions to the stocks above ground appear to be less burdensome. Development work is slackening off, in fact, in some sections very little new work is in progress or contemplated. In Texas and Louisiana the production is declining, and consequently prices are hardening, though no further advances are claimed.

REFINED AND PRODUCTS.—The demand for refined for export has continued moderately active during the past week, and the indications point to a continuance of the movement, as conditions abroad shew no material change. Affairs in Russia are considerably mixed and very uncertain, while advices by mail and cable are conflicting. Thus during the past week it was reported that the strike was over, and that shipments had been made, while later came news of a fresh labour disturbance, though no rioting. The situation both at Baku and Batoum is uncertain at best, but it is expected that the worst is over. The engagements during the past week amounted to over 200,000 barrels, all for shipment in bulk.

The price for barreled oil for export has remained steady at 7.50c. for New York loading, and at 7.45c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are steady at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel.

Cases for export have been in active request, and sales of over 700,000 are reported. The price of plain tops has been steady at 10c. Freight rates are firm.

Crude for export has been in active request, and sales of about 60,000 barrels are reported. Pennsylvania crude is quoted at 7.50c. in barrels.

Naphthas have ruled firm. For export, sales of 1,000 barrels have been reported.

CLOSING QUOTATIONS.

CRUDE.		Week ended	
		Sept. 22. 1906.	Sept. 29. 1906.
National Tran, Certificates	per bbl.	\$1.58 @ 1.59	\$1.58 @ 1.59
Pennsylvania crude in bbls.	per gal.	7.60	7.60
Pennsylvania crude in bulk	.. ..	4.50	4.50
Residuum, bbls. for export	.. ..	6 @ 6 1/2	6 @ 6 1/2

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Sept. 29. 1905.	Sept. 29. 1906.
Tiona .. ..	.. ..	1.61	1.68
Pennsylvania .. ..	.. ..	1.51	1.58
North Lima .. ..	.. ..	0.94	0.90
South Lima .. ..	.. ..	0.89	0.85
Indiana .. ..	.. ..	0.89	0.85
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.34	1.30

REFINED—FOR EXPORT.

		Week ended	
		Sept. 22.	Sept. 29.
Cargo Lots for export..	per gal. ..	7.50	7.50
In bulk .. ..	.. ..	4.40	4.40
Philadelphia loading ..	.. ..	7.45	7.45

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Sept. 22.	Sept. 29.
5,000 to 10,000 .. ..	.. ..	10.05	10.05
1,000 to 5,000 .. ..	.. ..	10.20	10.20

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Sept. 22.	Sept. 29.
120 fire test, S.W. ..	per gal. ..	12	12
130 fire test, S.W. ..	.. ..	12 1/2	12 1/2
150 fire test, W.W. ..	.. ..	13	13
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	12 3/4 @ 13 1/2	12 3/4 @ 13 1/2

NAPHTHA AND GASOLINE.

		Week ended	
		Sept. 22.	Sept. 29.
Naphtha, crude, car lots, 68 @ 72 deg.		15.00	15.00
Gasolene 86 deg. .. ..	.. ..	23.00	23.00

PENNSYLVANIA OIL RUNS from Sept. 21st to Sept. 27th were:—Sept. 21st, 104,191; Sept. 22nd and 23rd 198,157; Sept. 24th, 97,410; Sept. 25th, 129,628; Sept. 26th, 141,009; Sept. 27th, 127,846. For the month of August, 3,426,717.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—150,333; 257,235; 138,923; 87,264; 144,065; 131,322. For the month of August, 4,740,362.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended Sept. 28th and from Jan. 1st, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	202,600	8,821,300	9,361,900
Refined, cases	725,000	11,052,000	15,985,000
Crude, barrels and bulk..	59,300	1,245,400	823,200
Crude, cases	—	285,000	164,000
Naphtha, barrels.. ..	—	255,600	450,400
Residuum, barrels	—	580,200	705,000
Lubricating, barrels ..	—	218,200	114,900
Total, barrels cde. eq. ..	622,341	18,584,466	19,953,198

CLEARANCES FOR THE WEEK.

During the week ended Sept. 28th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	7,784,410	341,248,024	377,299,327
Crude	—	232,900	924,594
Naphtha	82,250	13,957,224	10,798,283
Residuum	—	3,619,600	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Sept. 28th ..	10,379,213
Total from New York, from Jan. 1, 1906 ..	455,913,600
Same period last year	504,590,459
Decrease	48,676,859
From United States, week ended Sept. 28th ..	26,492,336
Total from United States, since Jan. 1, 1906 ..	898,101,881
Same period last year	942,180,053
Decrease	44,078,172

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The "Review" Shipping List.

OCTOBER 11, 1905.

The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE.	Philadelphia	Sables d'Olonne	L. Oct. 4	HAINAUT (Dch.shp.)	Antwerp	Constant'ple	Arr. Sep. 23
ALCHYMIST	Bilbao	Terneuse ..	Arr. Sept. 25	HARRY	Cette	Kustendje ..	L. Oct. 5
AMERICAN	New York ..	Antwerp	Arr. Oct. 2	WADSWORTH			
APPALACHEE	San Francisco	Shanghai ..	Arr. S. Francisco, Sept. 22	HELIOS	Philadelphia	Rotterdam ..	P. Lizard, Oct. 9
APSCHERON	Novorossisk	St. Louis (Rhône)	P. Constant, Oct. 4	HOTHAM	Rouen	Middlesbro'	Arr. Sept. 13
ARAL	Tyne	Philadelphia	P. Dunnet Head, Oct. 8	NEWTON			
ARAS	New York ..	Hull & Tyne	L. Oct. 2	HOUSATONIC	San Francisco	Muroran	L. Sept. 18
ARGYLL	San Francisco	Port Harford	Arr. Sept. 24	IMPERIAL	—	—	Tr. on Lakes btn. U.S. and Can.
ASTRAKHAN	Hamburg ..	Tyne	Arr. Oct. 4	JOANNIS COUTZIS	Piræus	Sulina	Arr. Sept. 30
AUGUST KORFF..	Philadelphia	Hamburg ..	Arr. Oct. 2	J. B. AUG. KESSLER	Philadelphia	Calcutta	At Port Said, Oct. 8-9
AUREOLE	Tyne	Philadelphia	P. Dunnet Head, Sept. 30	JAMES BRAND	Tyne	Philadelphia	Arr. Oct. 6
AZOV	—	—	Trading on W.C. of South Amca.	KURA	Kustendje ..	London	P. Constanti'le, Oct. 7
BAKU STANDARD	Ibrail	Rouen	Arr. Oct. 5	LA CAMPINE	Philadelphia	Antwerp	Arr. Oct. 6
BALAKANI	London	Philadelphia	P. Prawle Pt., Sept. 28	LA FLANDRE	Philadelphia	Ghent	Arr. Oct. 6
BATOUM	Port Arthur (Texas)	Antwerp	Arr. Oct. 8	LA HESBAYE	New York ..	Antwerp	L. Sept. 30
BAYONNE	New York ..	Hull	Arr. Oct. 5	LA MADELEINE ..	Antwerp	Genoa	P. Dungeness, Oct. 6
BEACON LIGHT ..	Batoum	Cardiff	L. Oct. 4	LA VIGUESA	Philadelphia	Vigo	Arr. Sept. 15
BEME	Rangoon ..	Calcutta	L. Sept. 25	LACKAWANNA	Tyne	New York ..	Arr. Oct. 10
BLOOMFIELD	Rotterdam ..	Tyne and Philadelphia	Arr. Tyne, Oct. 10	LE COQ	Philadelphia	Havre	Arr. Oct. 5
BORJOM	Batoum	Odessa	L. Sept. 13	LOUTSCH	—	—	Tr. btwn. Odessa & Novorossisk
BRILLIANT	Gothenburg	New York ..	L. Tyne, Oct. 10	LUCERNA	Tyne	Philadelphia	P. Dunnet Head, Oct. 2
BROADMAYNE	Port Arthur (Texas)	Birkenhead	L. Sept. 25	LUCIFER	Philadelphia	London	P. Dover, Oct. 11
BULLMOUTH	Singapore ..	—	L. Oct. 7	LUCIGEN	Tyne	Philadelphia	P. Dunnet Hd., Sept. 29
BULYSES	Balekappan	Port Natal ..	Arr. Oct. 7	LUCILINE	Dunkirk ..	Tyne	Arr. Sept. 22
BURGERMEISTER	Tyne	Philadelphia	P. Dunnet Head, Sept. 29	LUMEN	Kustendje ..	Rouen	P. Sagres, Oct. 9
PETERSEN				LUX	Novorossisk	Rouen	Arr. Oct. 8
CADAGUA	Philadelphia	Rouen	Arr. Oct. 4	MAKKAWEI	—	—	Trading in Black Sea
CALCUTTA (Br. bq.)	San Francisco	Shanghai ..	L. Aug. 15	MANHATTAN	Savona	Messina	Arr. Sept. 27
CARDIUM	Cardiff	Singapore ..	L. Suez, Sept. 23	MANNHEIM	Philadelphia	Copenhagen	P. Del. Break, Sept. 27
CAUCASIAN	Philadelphia and Cardiff	Liverpool ..	Arr. July 12	MARGARETHA ..	Kustendje ..	England	L. Oct. 1
CHARLOIS	Amsterdam	Philadelphia	Arr. Oct. 7	MEXICAN PRINCE	Liverpool ..	Port Arthur (Texas)	L. Oct. 4
CHESAPEAKE	Philadelphila	London	P. Del. Break, Sept. 28	MIRA	Batoum	London	P. Gibraltar, Oct. 9-10
CHESTER	Antwerp	Philadelphia	Arr. Oct. 2	MUREX	Shanghai ..	— & Cardiff	L. Oct. 8
CIRCASIAN	—	—	Trading on W.C. of South Amca.	NARRAGANSETT..	London	New York ..	Arr. Oct. 6
PRINCE				NERITE	—	—	Tr. in China Seas
CLAM	Balekappan	—	L. Oct. 4	NEW YORK	Southampton	New York ..	145 mls. W. Lizard Oct. 7
COWRIE	Batoum	—	P. Singapore, Sept. 25	OCEAN	Philadelphia	Amsterdam	P. Del. Break, Sept. 29
CYMBELINE	Philadelphia	Antwerp	L. Oct. 10	ORANJE PRINCE..	Banes	Flushing....	L. Oct. 4
CZAR NICOLAI II.	Batoum	Hamburg ..	Arr. Oct. 7	ORIFLAMME	Tyne	Philadelphia	P. Dunnet Head, Oct. 7
DAGHESTAN	Batoum	Thameshaven & Hamburg	P. Constant'ple, Sept. 30	OSCEOLA	Rio Janeiro	Del. Break..	Arr. Oct. 3
DAKOTAH	San Francisco	Shanghai ..	L. Sept. 24	OTTAWA	Philadelphia	Vera Cruz ..	P. Del. Break., Sept. 2
DELAWARE	Manchester	New York ..	P. Eastham, Oct. 4	OURAL	Antwerp	Port Arthur (Texas)	P. Lizard, Sept. 17
DEUTSCHLAND ..	Savona	New York ..	L. Algiers, Oct. 1	PALEMBANG	—	—	Tr. Sts. Settlem'ts & China Seas
DIAMANT	New York ..	Swinemunde	Arr. Oct. 4	PAULA	New York ..	Lisbon	Arr. Lisbon, Oct. 7
ELAX	Samboe	—	L. Sept. 20	PECTAN	Emden	& Oporto	P. Sand Key, Oct. 10
ELISE MARIE	Stettin	New York ..	L. Tyne, Oct. 9	PENNOIL	Tyne	Philadelphia	Arr. Oct. 2
ENERGIE	Danzig	New York ..	L. Tyne, Oct. 4	PERLAK	Calcutta	Aroe Bay ..	L. Sept. 2
ERIVAN	Antwerp	Philadelphia	P. Prawle Pt., Oct. 9	PHOEBUS	New York ..	Hamburg ..	P. Dover, Oct. 9
EUPLECTELA	Cardiff	Philadelphia	Arr. Oct. 9	PINNA	Port Arthur (Texas)	—	L. Newport News, Oct. 4
EXCELSIOR	New York ..	Venice	L. Sept. 28	POTOMAC	Tyne	New York ..	L. Oct. 7
EZIO	—	—	Coasting Peru	PROMETHEUS	Hamburg ..	New York ..	P. Dunnet Hd., Oct. 3
FRANCE MARIE ..	Philadelphia	Alicante	P. Del. Break., Sept. 30	PRUDENTIA	Bremen	Wilmington..	Arr. Oct. 10
GEESTEMUNDE ..	New York ..	Hamburg ..	Arr. Sept. 23	RION	Ibrail	Hull	L. Sulina, Oct. 9
GENESSE	London	New Orleans	P. Sand Key, Sept. 29	ROCK LIGHT	London	Cardiff	Arr. Sept. 17
GEORGIAN	Tyne	Girgenti	In the Downs, Oct. 8	ROSSIJA	Hamburg ..	Novorossisk	Arr. Oct. 5
PRINCE				ROTTERDAM	New York ..	Amsterdam	Arr. Oct. 2
GOLDMOUTH	Singapore ..	—	P. Anjer, Aug. 28				
GUT HEIL	Philadelphia	Bremerhaven	P. Scilly, Oct. 9				

Vessel.	From.	For.	Latest Date and Position.
RUSSIAN PRINCE SALAHADJI	Philadelphia	Liverpool ..	Arr. Sept. 20 Tr. Sts. Settlem'ts & Java Seas
SEMINOLE	San Francisco	Calcutta	L. Sept. 21
SILVERLIP	Samboe	Rotterdam ..	Arr. Oct. 7
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Philadelphia & Birkenhead	—	P. Eastnam, Oct. 10
SOPHIE	Kustendje ..	Italy	L. Const'iple, Oct. 4
SPONDILUS	Tyne	Singapore ..	P. Malta, Oct. 10
STANDARD	Philadelphia	Pillau	Arr. Oct. 3
STROMBUS	Cardiff	Singapore ..	Arr. Oct. 2
SURAM	Newport	New York ..	L. Oct. 4
SUWANEE	Kustendje ..	London	Arr. Constant'le, Oct. 3
SVIET	Alexandria ..	Odessa	Arr. Sept. 15
TELENA	Singapore ..	—	L. Natal, Oct. 8
TEREK	London	New York ..	L. Oct. 10
TIFLIS	Antwerp	Batoum	P. Const'iple, Oct. 5
TIOGA	Flushing....	New Orleans	L. Oct. 4
TONAWANDA	Hong Kong..	San Francisco	Arr. Oct. 8
TROCAS	Hong Kong..	—	Arr. Singapore, Oct. 8
TURBO	Hamburg ..	Cardiff	Arr. Oct. 4
TUSCARORA	Bombay	Hong Kong	L. Sept. 17
TWINGONE	Rangoon....	Calcutta & Cocanada	L. Oct. 1
VEDRA	Batoum	Manchester	Arr. Sept. 27
VILLE DE DIEPPE	—	—	In Havre, Oct. 5
VILLE DE DOUAI	Ibrail	Campana ..	Arr. Rio de la Plata, Oct. 4
VOLUTE	Hong Kong	—	L. Oct. 5
WEEHAWKEN	Philadelphia	St. John & Manchester	P. Del. Break, Sept. 30
WILLKOMMEN ..	Philadelphia	Danzig	L. Oct. 3
WINNEBAGO (late Kinsman)	San Francisco	Hankow	L. Sept. 1

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

October 12th, 1906.

Refined Petroleum is unchanged since our last report, and is quoted:—Russian and Roumanian, 6½d.; American, 6½d.; Water White, 7½d.

LUBRICATING OILS.

Prices are unaltered, latest quotations being:—

American pale, £7 to £9 10s.

American dark cylinder, from £7 2s. 6d.

American filtered cylinder, from £11.

Shellene, £5.

No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine is very firm and increasing in price almost daily, the latest quotation being for Spot 49s. 3d., November to December, 49s. 6d.; and January to April 50s. 3d.

LIVERPOOL OIL MARKET.

October 11th.

Refined oils are quiet, and sellers now quote 5½d. for Russian, Galician or Roumanian; and 6½d. to 7½d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, October 11th.

Refined, in cases, is lower at 10'00; Standard White, 7'50; Credit balances, 1'58c.

PHILADELPHIA, October 11th.

Standard White is still quoted at 7'45.

RUSSIA.

BAKU, October 8th.

The Baku oil market is quiet, and prices shew a tendency to decline. Light crude oil, spot, 28½ to 29¾ copecs per pood, future delivery 24½ to 25 copecs; residuals, spot 30½ to 31 copecs.

BELGIUM.

ANTWERP, October 6th.

The petroleum market is unchanged. Price of Standard White, spot, 19½ francs per 100 kilos.; and three last months of the year 20 francs.

FRANCE.

PARIS, October 6th.

Illuminating oil is quoted in bulk, in whole tank waggons, 20'25 francs per hectolitre; spirit, 25'25 francs per hectolitre. Special white oil, 28'50 francs per hectolitre.

GERMANY.

HAMBURG, October 6th.

The kerosene market is firm. The price of American Standard White is 6'80 marks per 50 kilos.

ROUMANIA.

October 3rd.

Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs. ... 3'80-4'00

Refined oil, exclusive of taxes ... 12'00- —

Motor benzine, including taxes ... 16'00-18'00

Benzine, doubly refined ... 24'00-25'00

Residuals in tank waggons, at refinery ... 3'20-3'30

Paraffin ... 120'00-125'00

Lubricating Oils—

Agricultural... 30-32

Prime ... 35-37

Extra ... 40-42

Royal ... 45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilo.

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs. 7'50- 8'00

Benzine, sp. gr. 0'710-0'715 ... 15'00-16'00

„ sp. gr. 0'720-0'725 ... 14'00-15'00

„ sp. gr. 0'730-0'740 ... 11'00-12'00

„ sp. gr. 0'745-0'755 ... 7'00- 8'60

INDIA.

BOMBAY, October 1st.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. .. Rs. 6 0 2

„ Chester, 125 deg. .. 4 8 2

„ Monkey Brand, 125 deg. .. 4 2 2

„ Bulk, 125 deg. (in local made tins) .. 3 10 0

„ 125 deg. (8 Imperial gallons) .. 3 0 0

„ "White Camelia" brand, 125 deg. .. No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair .. 3 2 0

Borneo oils, in tins, per pair .. 3 2 0

Sumatra "Rising Sun," bulk, per unit .. 3 0 0

„ tins, per pair .. 3 10 0

Silverlight cases, per case .. 4 8 0

Russian, "Anchor," cases .. 4 14 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for .
this Journal by . . .
the Custom House. .*

FOR THE WEEK ENDED OCTOBER 1ST, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Sept.	LONDON—			
25	Scott's Wharf ..	M Lub.	2,000	New York
25	Fielder, Hickman and Co..	Lub.	5,600	"
25	London Oil Storage Co. ..	"	6,118	Hamburg
26	Union Lighterage Co. ..	M.Lub.	4,278	Philadel.
26	" ..	M.Colza	2,484	"
26	Anglo-American Oil Co. ..	Lub.	48,000	New York
26	A. Brown and Co. ..	"	2,000	Hamburg
26	T. H. Lee ..	M.L.Gr.	80	Hamburg
27	G. W. Sheldon and Co. ..	M.Lub.	145	Antwerp
27	T. H. Lee ..	M.L.Gr.	2,175	Hamburg
27	" ..	M.Lub.	76	"
27	Burt, Boulton, & Heywood.	Naph.	1,543	Terneuzen
27	Fielder, Hickman and Co..	L.Gr.	6,000	New York
27	H. Funck and Co. ..	Lub.	10,100	Philadel.
27	London Oil Storage Co. ..	"	800	Hamburg
28	Hay's Wharf..	M.Lub.	672	"
28	T. H. Lee ..	M.L.Gr.	596	"
28	" ..	Crude	1,920	"
28	" ..	Resid.	192	"
28	" ..	Lub.	960	"
28	Mordaunt Bros. ..	"	3,000	Philadel.
28	W. Balchin ..	"	17,120	"
28	Anglo-American Oil Co. ..	"	53,600	"
28	" ..	Lub.Gr.	1,000	"
29	Scott's Wharf ..	M.Lub.	4,000	New York
Oct.				
1	G. W. Sheldon and Co. ..	M.L.Gr.	640	"
1	T. H. Lee ..	"	770	Hamburg
1	Lon. and Thames Haven Oil Wharves ..	Naph.	34,950	Rotterdam
1	R. Park and Co. ..	Lub.	782	Marseilles
1	J. L. Lyon and Co. ..	Turps Sub.	395	Antwerp
1	G. W. Sheldon and Co. ..	M Lub.	200	"
Sept.	LIVERPOOL—			
25	Pickford's, Ltd. ..	"	370	Hamburg
25	" ..	M.L.P.	996	"
25	Meade-King, Robinson & Co.	M.Lub.	4,800	New York
26	Burnaby and Chantrell ..	M.L.Gr.	784	"
26	J. Light and Son ..	M.Gr.	400	"
26	Huxley and Co. ..	Lub.	480	Hamburg
27	W. B. Dick and Co..	"	11,945	Philadel.
27	Meade-King, Robinson & Co.	M.Lub.	6,000	"
27	Worthington and Boler ..	"	1,440	"
17	Crew, Levick and Co. ..	"	4,106	"
27	" ..	"	4,281	"
27	Anglo-American Oil Co. (Delaware)	Lamp	440,000	New York
27	Vacuum Oil Co. ..	M.Lub.	8,440	"
27	A. Hopps and Sons ..	"	10,000	Baltimore
Oct.				
1	Liverpool Storage Co. ..	Lub.	5,960	New York
1	Cunard Steamship Co. ..	L.Gr.	480	"
1	Meade-King, Robinson & Co.	Spirit	57,400	Rotterdam
24/8	Huxley and Co. ..	Lub.	1,200	Hamburg

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Sept.	BRISTOL—			
27	Anglo-Bosphorous Oil Co..	M.L.Gr.	2,240	Hamburg
27	W. G. Clarke ..	M.Lub.	185	Antwerp
27	H. Pritchard and Co. ..	Lub.	504	Hamburg
28	" ..	"	500	New York
29	Western Pet. Co. (Surana)..	Illum.	1,242,000	Trieste
29	Pickford's, Ltd. ..	M.Lub.	1,190	Hamburg
29	H. R. James and Sons ..	Lub.	2,800	New York
	GRIMSBY—			
28	J. Sutcliffe and Son ..	"	480	Antwerp
	HULL—			
21	Hull and Nether. S.S. Co.	Tar oil	1,920	Rotterdam
25	Thos. Wilson, Sons and Co.	Lub.	1,000	Riga
25	Wilsons and N.E. Railway Shipping Co.	"	2,400	Antwerp
26	" ..	"	800	Hamburg
	MANCHESTER—			
7	Fletcher, Woodhill and Co.	Benzine	1,600	Treport
25	Bramwell, Fern and Co. ..	M.Lub.	2,066	New York
26	" ..	M.Colza	2,400	"
25	Liverpool Storage Co. ..	M.Lub.	10,140	"
26	Liverpool Warehousing Co.	"	211,640	"
26	W. Hodgson and Co. ..	M.L.Gr.	573	"
26	" ..	Lub.	1,400	Riga
26	Bramwell Fern and Co. ..	M.Lub.	720	Antwerp
26	J. T. Fletcher and Co. ..	"	280	"
27	Meade-King, Robinson & Co. (Vedra)	Illum.	420,000	Batoum
27	W. Hodgson and Co. ..	M.Lub.	11,780	Riga
28	Liverpool Warehousing Co	"	800	New York
	NEWCASTLE—			
25	E. Hassell and Son ..	"	58,720	"
25	Tyne-Tees S.S. Co..	"	1,240	Antwerp
26	" ..	"	220	Hamburg
26	Furness, Withy and Co. ..	"	7,480	New York
27	Tyne-Tees S.S. Co..	"	520	Hamburg
	DUNDEE—			
28	A. B. Fleming and Co. ..	"	2,191	Riga
	GLASGOW—			
26	Clyde Shipping Co..	"	320	Antwerp
26	J. and A. Allan ..	Lub.	54,200	Philadel.
26	" ..	Illum.	2,555	"
26	Anchor Line ..	M.Lub.	76,188	New York
	GRANGEMOUTH—			
27	W. Graham-Yooll and Co.	Illum.	2,000	Hamburg
27	J. Currie and Co. ..	Lub.	4,000	"
27	" ..	"	2,120	"
28	" ..	"	2,480	"
	LEITH—			
20	J. Currie and Co. ..	"	1,200	"
26	" ..	"	120	"
27	G. Gibson and Co. ..	"	160	Antwerp
29	J. Currie and Co. ..	"	390	Hamburg
29	W. Graham-Yooll and Co.	Illum.	2,180	"
Total for the Week ..			4,923,981	

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== QUALITY TELLS. ==

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FOR THE WEEK ENDING OCTOBER 8TH, 1906—

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Oct.	LONDON—			
1	Carless, Capel and Leonard	Naph.	34,950	Rotterdam
2	Anglo-American Oil Co. ..	Lub.	64,000	New York
2	Produce Brokers ..	M.Lub.	10,000	"
2	Fielder, Hickman and Co. ..	Lub.	10,100	"
3	G. W. Sheldon and Co. ..	M.L.Gr.	90	"
3	London & India Docks Co. ..	Lub.	400	"
3	Asiatic Petroleum Co. ..	Benzine	620,000	Pulo Samboe (Silverlip)
3	London Oil Storage Co. ..	Lub.	1,600	Hamburg
4	G. W. Sheldon and Co. ..	M.L.Gr.	150	Antwerp
4	W. Balchin ..	Lub.	10,000	Hamburg
4	J. Spurling ..	Lub Gr.	409	New York
4	G. and H. Green ..	Lub.	3,330	"
5	W. Balchin ..	"	400	Hamburg
6	Stern, Senneboe Oil Co. ..	M.Lub.	1,200	"
6	W. B. Dick and Co. ..	Lub.	4,500	Philadel.
14/9	J. L. Lyon and Co. ..	Turps Sub.	490	Antwerp
8	A. Brown and Co. ..	Lub.	4,000	Philadel.
8	W. Balchin ..	"	16,000	"
8	G. W. Sheldon and Co. ..	M.L.Gr.	305	New York
8	"	Lub.	800	"
8	"	L.Gr.	130	Antwerp
8	T. S. Harris and Co. ..	M.Lub.	9,600	New York
8	Scott's Wharf ..	"	6,000	"
8	Humphrey and Co. ..	Lub.	7,446	"
8	A. Brown and Co. ..	"	1,000	Hamburg
8	T. H. Lee ..	M.Lub.	1,310	"
8	J. Harrison, Ltd. ..	Lub.	320	Antwerp
	LIVERPOOL—			
2	Bramwell Fern and Co. ..	M.Lub.	560	"
2	Dee Oil Co. ..	"	240	"
2	Liverpool Storage Co. ..	Resid.	4,000	Montreal
2	G. B. Taylor ..	M.Lub.	520	New York
3	"	"	62,800	"
3	Meade-King, Robinson & Co. ..	Resid.	10,000	Montreal
4	Gandy Belt Manufac. Co. ..	Lub. Gr.	107	Antwerp
4	Pickfords ..	L.Paste	1,244	Hamburg
4	"	"	497	"
4	Cunard Steamship Co. ..	"	90,720	New York
4	"	M.Colza	9,576	"
4	Burnaby and Chantrell ..	M.L.Gr.	616	"
4	Crew, Levick and Co. ..	M.Colza	6,100	"
4	"	M.Lub.	11,187	Philadelphia
4	W. B. Dick and Co. ..	Lub.	6,200	"
5	Meade-King, Robinson & Co. ..	M.Lub.	11,600	"
5	MacGowan Bros. ..	M.L.Gr.	245	"
5	Valvoline Oil Co. ..	M.Lub.	9,020	New York
5	Burnaby and Chantrell ..	M.L.Gr.	1,788	"
5	George B. Taylor ..	M.Lub.	800	"
8	Meade-King, Robinson & Co. ..	"	8,000	"
8	Cunard Steamship Co. ..	"	1,512	"
8	Liverpool Storage Co. ..	Resid.	4,000	"
8	W. Gibson and Sons ..	M.Lamp	2,050	Boston
8	Duncan Fox and Co. ..	Benzine	400	Callao
	BRISTOL—			
1	W. Smith and Co. ..	Lub.	12,200	New York
2	W. G. Clarke ..	M.Colza	1,214	Antwerp
	GOOLE—			
5	Goole Steam Shipping Co. ..	Mineral	72	Hamburg

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Oct.	GRIMSBY—			
29/9	J. Sutcliffe and Son	Lub.	180	Hamburg
2	"	"	400	Antwerp
	HULL—			
1	Hull & Netherlands S.S. Co.	Tar Oil	1,600	Rotterdam
4	"	"	1,600	"
4	T. Wilson, Son and Co. ..	Lub.	6,800	New York
5	"	"	1,200	S. Petersburg
5	Wilsons and N.E. Railway Shipping Co.	Crude	680	Dunkirk
6	"	Lub.	240	Hamburg
8	"	"	2,160	Antwerp
8	"	"	640	"
	MANCHESTER—			
3	Manchester Liners ..	M.Lub.	15,600	Philadel.
5	Crew, Levick and Co. ..	"	19,588	"
8	"	M.Colza	16,868	"
8	Meade-King, Robinson & Co. ..	M.Lub.	73,400	"
8	"	"	20,000	"
8	"	Lamp	24,000	"
8	C. H. Morton and Son ..	M.Lub.	1,760	"
8	D. Currie and Co. ..	Lub.	1,200	Hamburg
	MIDDLESBRO'—			
3	E. Harris and Co. ..	M.Lub.	480	Antwerp
	NEWPORT—			
6	Mordey, Jones and Co. ..	M.L.Gr.	285	"
	NEWCASTLE—			
2	Tyne-Tees Steamship Co. ..	M.Lub.	90	Hamburg
2	"	"	2,280	Antwerp
2	"	"	4,160	"
	PLYMOUTH—			
1	Anglo-American Oil Co. (Bayonne)	Illum.	238,620	New York
1	"	Resid.	122,075	"
1	"	Lamp	123,800	"
	DUNDEE—			
1	D. Alexander and Sons ..	M.Lub.	400	"
	GLASGOW—			
1	Anchor Line ..	"	93,260	New York
1	"	M.Colza	9,600	"
1	"	M.L.Gr.	1,200	"
2	Clyde Shipping Co. ..	"	70	Antwerp
	GRANGEMOUTH—			
3	J. Currie and Co. ..	Illum.	2,000	Hamburg
3	"	Lub.	800	"
4	"	"	2,200	"
	LEITH—			
2	G. Gibson and Co. ..	"	449	Antwerp
2	J. Currie and Co. ..	"	360	Hamburg
6	"	"	200	"
	Deduct to Correct—		1,856,034	
Oct.	LONDON—			
1	London and Thames Haven Oil Wharves ..	Naph.	34,950	Rotterdam
31/8	J. Hardy ..	Lub.	86,400	Philadel.
	LIVERPOOL—			
11/9	J. T. Fletcher and Co. ..	M.Colza	250	Ghent
24/8	Huxley and Co. ..	Crude	1,203	Hamburg
	Total for Week ..		1,733,234	
	Total for the past Fortnight ..		6,657,215	

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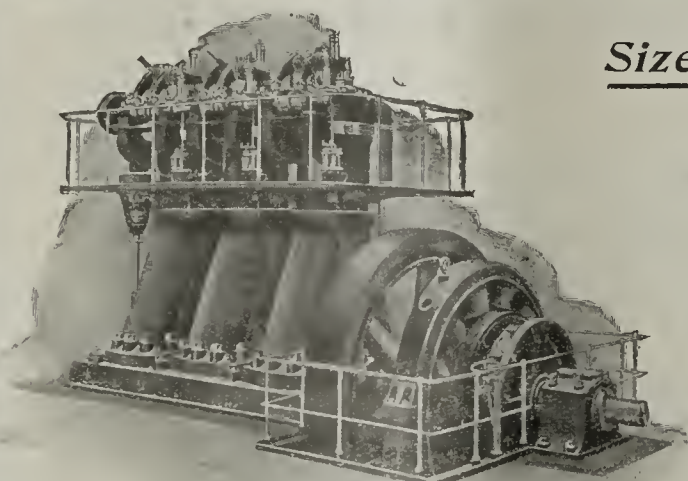
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

OCTOBER 27TH, 1906.

No. 384.

Editorial Notes.

California to the Front. The progress which the Californian petroleum industry has been making for the past few years continues, and the causes which affect the oil trade throughout the majority of the eastern fields of America find no reflection beyond the Rockies. The Californian fields are now passing through a period of almost unprecedented activity. On the one hand, producers are going ahead with production, and on the other, the various companies so closely associated with the transportation of the Californian product are constantly putting forth efforts in order that the markets may be extended. It is, of course, known that Californian products will shortly play an important part upon the English market, but apart from this, considerable attention is being paid to Japan, where at the present time very significant moves are taking place. A number of large refineries are to be erected in Japan to treat the Californian crude oil; these being considerably assisted by the new Japanese tariff which provides for a duty of 40 per cent. upon refined and 20 per cent. upon crude oil. A large fleet of tank steamers, we learn, are being or about to be constructed in Japan, and under the flag will be continuously engaged in carrying the Japanese crude oil from the Californian coast across the Pacific. Thus a great impetus is to be given to the Californian petroleum industry.

Concerning Petroleum Deposits. A most important addition has recently been made to petroleum technological literature by the publication of a work by Prof. H. Hoeffler upon "Petroleum and its Products," this being an enlarged and revised edition of the same author's book issued nearly twenty years ago, and which was accorded such a good reception among geologists and chemists. As the author points out in his preface, since that time the petroleum industry in the various countries has undergone great development, and considerable literature has appeared for the guidance of those interested in it. We are inclined to share the same opinion as Prof. H. Hoeffler that much of this literature has been of a worthless nature, but it is consoling to know that periodically we do get serious works which are bound to be of inestimable value to the diligent student. The present book is a general history of petroleum and its allied products, the various matters being more thoroughly considered than has ever been the case before. One chapter dealing with the primary and secondary deposits of petroleum occurrences is of particular importance; consequently we deal with this part of the work fully in another part of this issue. We have every reason to believe that the present publication will receive that cordial support it so richly deserves.

The American Oil Fields in September. The one thing which prominently stands out in connection with the operations in the American oil fields during September is the determined effort now being made to cope with the glut in production in the Illinois and Mid-Continent fields, where, as our readers will know, an excessive production has had a most depressing effect upon the conditions of the market, and quite naturally drilling activity has had a setback in order that the present difficulty may be overcome. The rise of oil producing territories to enviable fame was ever rapid. Take, for instance, the Illinois fields. Twelve months ago, Illinois was practically unknown in the consideration of the world's supply of petroleum, but now, the State is an active rival of all the old producing fields of America, and at the same time bids fair to surpass in extent of area and productiveness the famous Trenton Rock sections of Indiana and the Buckeye State. In the Mid-Continental fields, too, we see the result of a remarkable over-production. A glut of a most pronounced character has been caused, and the temporary halt in the production, is only one attempt to remedy the present state of things. Day by day, however, the outlet to the Texas refineries of which we spoke in the last issue of the REVIEW continues, and here, there is no doubt the one solution of the trouble is to be found. The constantly declining production from the Texas fields makes it necessary that supplies from other sources will be able to command a market, and the practical idea of transporting large quantities of the Kansas and Indian Territory oil to Texas, there to make up for the continued decrease in stocks, is certain to materially improve matters all round.

Possibilities of Liquid Fuel in Africa. It can be said with a great amount of certainty that in very few parts of the world do such vast possibilities exist for the useful employment of liquid fuel as is the case in South and West Africa. Consequently it is easy to understand the great amount of interest which is now being centred around the discoveries of large tracts of petroliferous areas in many districts in the African Continent, and more especially in the western portions. That there is a wide scope for a thriving petroleum industry in West Africa, and that it would confer great benefits upon the mining industry is, of course, a matter of common knowledge, for an efficient and cheap supply of fuel in large and increasing quantities is absolutely vital to the ultimate success of the mines in the lower grade series on the Gold Coast. It is nearly twenty years ago since Sir Richard Burton in his book, "To the Gold Coast for Gold," incidentally mentioned the petroliferous indications in Western Africa, and though the intervening years have done little to push matters commercially forward, it does now seem that we are within measurable distance of the many promising localities being thoroughly tested.

RUSSIAN AND ROUMANIAN NOTES.

A ROYAL VISITOR.—The Crown Prince of Roumania recently visited the wells and refinery of the Steaua Romana at Campina.

Mr. ECKLUND, hitherto the local manager for Nobel Bros. at Baku, has been recently promoted to the position of general manager to the same firm at St. Petersburg.

A MAGURA STRIKE.—Well No. 3 of the Matitza Co. at Magura has commenced to spout from a depth of 260 metres. The yield of oil has not yet been fixed owing to the large quantity of sand thrown out.

ROUMANIANS FOR ROUMANIA.—According to statistics prepared by the Roumanian Minister of Domains, of all the persons employed in the Roumanian petroleum industry in various capacities 9.7 per cent. are Roumanians and only 9.3 per cent. are foreigners.

ROUMANIAN TAX RECEIPTS.—The receipts from the petroleum tax in Roumania have for the period of from 1st of April to 31st of August, 1906, amounted to 917,001 francs, which is 134,932 francs more than in the corresponding period of 1905, and 200,954 francs in excess of budgetary estimate.

TO OPEN UP OIL FIELDS.—A survey has just been completed having as its object the construction of a narrow gauge railway between the rivers Northern Dirna and Petchora, a distance of some 130 versts. One of the main objects of this line will be to facilitate the opening up of the oil fields on the Uchta river, a tributary of the Petchora. These oil fields are very extensive, and it only needs good means of transport to render them of great industrial importance.

THE FERGHANA FIELDS.—A correspondent in the *Trade and Industry Gazette*, referring to the formation of a new company for the exploitation of the Ferghana oil fields, expresses his doubts as to whether those oil fields will prove of any great industrial importance in the near future. Some of the wells drilled have proved fairly prolific, but their durability is still to be proved. Then again Ferghana crude oil contains a considerable percentage of paraffin. If treated in the same manner as Baku crude, *i.e.*, distilling off the benzine and kerosene fractions, the residuals left are too thick for use as liquid fuel, and therefore at present the benzine oil is taken off. In order to produce kerosene and at the same time also a fluid fuel oil, the paraffin scale has to be extracted, which requires a costly installation, and it is doubtful whether the existing companies, or those about to be formed, will have sufficient capital for the purpose.

PATENTS.

APPLICATIONS FILED IN GREAT BRITAIN.

Manufacture of an Improved Material for Refining Oils, Fats, Waxes or the like.—Robert Francis Spaul and Frank Hilling Spaul, London. No. 22301 of 1906.

Treating Vegetable and Mineral Oils.—Josiah Harris, London. No. 22430 of 1906.

Improvements in Refining Mineral Oils.—James Noad and Edward Joseph Townsend, London. No. 22395 of 1906.

AMERICAN PATENT GRANTED.

Well-Drilling Machine.—Leonard D. Shrycock, Marietta, Ohio.

In a spudding attachment for well-drilling machines, the combination of a machine frame, a shaft journaled in the frame, a crank on the shaft, the crank being located outside the frame, a drilling cable operative within the frame, a lever fulcrumed to the frame with one hand intersecting the plane of movement of the crank, a connection between the projecting end of the lever and the crank and a spudding line connecting the lever with the drilling cable.

Moeara Enim Co.'s Production.—The production of crude oil by the Moeara Enim Co. in Sumatra, during the first nine months of 1906, amounted to 109,500 tons.

LONDON OIL SHARE MARKET.

FRIDAY, OCTOBER 26TH.

Movements in the Oil Share Department of the London Stock Exchange have been checked in conjunction with other sections by the unexpected action on the part of the Directors of the Bank of England in raising the Bank Rate to 6 per cent., but the small improvements registered previous to the announcement have been fairly well maintained, while dealing has been on a larger scale than for some time past.

On Saturday, Oct. 12th, the list of quotations stood as follows:—Anglo-Russians 0- $\frac{1}{8}$, Assam Oil $\frac{5}{8}$ - $\frac{7}{8}$, Baku Ordinary 2s. 9d. to 3s. 3d., Preference 5s. to 6s., Bibi-Eybats $\frac{7}{16}$ - $\frac{9}{16}$, Debentures 86-91, California Oilfields 5 $\frac{1}{4}$ -5 $\frac{3}{4}$ ex.-div., Refineries 1-1 $\frac{1}{8}$, European Petroleum Preference $\frac{1}{8}$ - $\frac{1}{4}$, Debentures 82-85, Russian Ordinary 9s. 6d. to 10s. 6d., Preference 11s. to 11s. 6d., Debentures 90 to 93, Spies $\frac{3}{8}$ - $\frac{7}{8}$, Shell Transport Ordinary 29s. 6d. to 30s. 6d., Preference 9 $\frac{1}{4}$ -9 $\frac{3}{4}$, Schibaieff Ordinary 7s. to 8s. and Preference 2 $\frac{1}{2}$ -3.

Business was fairly active for the next few days, changes on balance shewing an advance of 6s. per share in Baku Ordinary at 3s. 3d. to 3s. 9d., in the Preference at 5s. 6d. to 6s. 6d., and in Schibaieff Ordinary at 7s. 6d. to 8s. 6d., while Spies improved 7 $\frac{1}{2}$ per share at $\frac{1}{3}$ $\frac{1}{2}$ - $\frac{1}{3}$ $\frac{5}{8}$, and Russian Ordinary gained no less than 1s. 6d. at 11s. to 12s.

On Friday the rise in the Bank Rate previously referred to created a general feeling of uneasiness, but oil shares did not suffer any depreciation in value, and subsequent business has only resulted in two alterations, first a fall of 3d. in Baku Ordinary at 3s. to 3s. 6d. on Saturday, and an advance of $\frac{1}{4}$ in Californian Oilfields on Wednesday at 5 $\frac{1}{2}$ -6.

At the fortnightly carry over, which commenced on Wednesday, the stringency of money was much in evidence and rates of interest ruled exceptionally high. A comparison of "making up" prices disclose advances in the majority of instances, Baku Preference improving 1s. 6d. at 6s. 6d., Russian Ordinary 1s. 3d. at 11s. 6d., Preference 9d. at 12s., Baku Ordinary 6d. at 3s. 3d., Schibaieff Ordinary ditto at 8s., and Spies $\frac{1}{16}$ at $\frac{7}{16}$. Californian Oilfields were $\frac{3}{8}$ lower at 5 $\frac{1}{2}$, but allowance must be made for the dividend which had been deducted, while Anglo-Russians at $\frac{1}{16}$, Schibaieff Preference at 2 $\frac{3}{4}$, and Shell Transport Ordinary at 1 $\frac{1}{2}$ shew no change.

BATOU PETROLEUM SHIPMENTS.

The following are the shipments of petroleum products from Batoum during the week ended September 30th:—

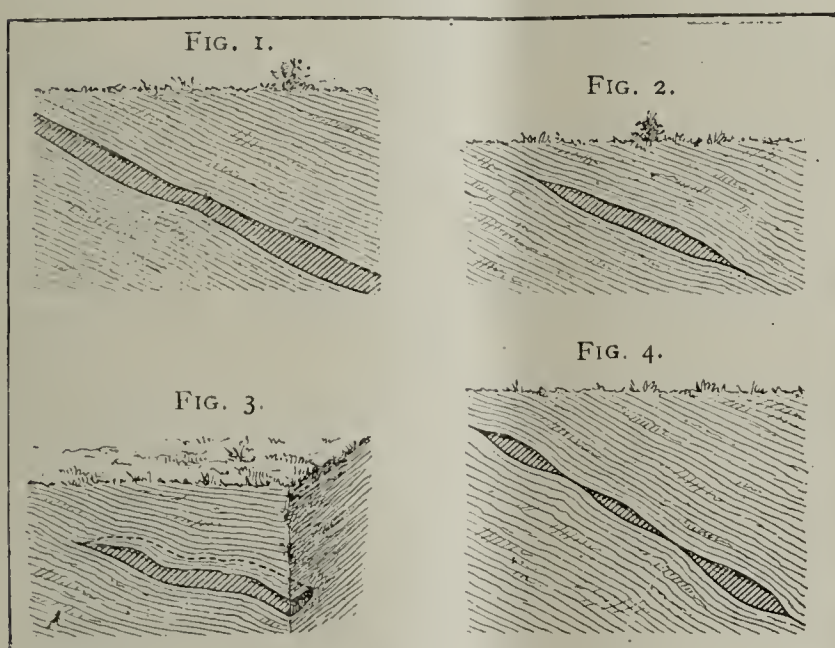
	Illuminating oil.		Other products.	
	1905.	1906.	1905.	1906.
To Europe	638,000	327,000	191,000	—
To the East	7,000	91,000	2,000	—
To Russian Ports	124,000	—	10,000	—
From Jan. 1st to Sept. 30th:—				
To Europe	17,531,000	10,091,000	7,464,000	6,160,000
To the East	8,573,000	5,221,000	310,000	45,000
To Russian Ports	2,334,000	2,365,000	193,000	184,000

The Primary and Secondary Deposits of Petroleum Occurrences.

By PROF. H. HOEFFER.

The natural great accumulations of petroleum in the earth's crust or on its surface are called its deposits, which can be either primary (original) or secondary (locally changed).

Petroleum, as is proved lower down, is of organic origin; it could, therefore, only have been where there are organisms, and therefore it could not have originated in massive or eruptive rocks, nor in the oldest petrified



(archaic) rocks. This is supported by all facts which have so far come to light.

The primary or original deposits of petroleum can, therefore, belong to the strata of the pre-cambrian age. It is a remarkable fact, however, that in the series of strata containing powerful coal seams petroleum deposits are either entirely absent or of small technical importance.

In the primary deposits, organisms must have accumulated and conditions must have prevailed which favoured the process of transformation, and the accumulation of the product of transformation, petroleum, they can therefore only be sedimentary or layer deposits. Next to the organisms, inorganic masses, such as gravel, sand, mud, or the hard portions of animals are deposited, so that the petroleum formed later penetrates this series of strata. The primary deposits, therefore, represent an impregnated stratum (Fig. 1) or an impregnated deposit (Fig. 2), according to whether it is of a flat form or lenticular form. Both types which differ only geometrically are found in nature. There are also elongated so-called tubular deposits (Fig. 3) containing petroleum, as in Pechelbronn, Alsace. Deposits which were at one time considered as one extended stratum, have on further investigation been found to represent a deposit zone, *i.e.*, several more or less large deposits belonging to the same stratum, as is the case at Balakhany. Tubular deposits are also sometimes found in zones. Several deposits can be found one under the other; when the distance between them is slight they form series.

Sand, gravel, coarse-grained sandstone, conglomerate, especially when these rocks are poor in binding materials, porous limestone, and generally rocks with many and

large pores or numerous crevices take petroleum in large quantities, and when opened up will give it up more rapidly than compact formations. In fact, the rich primary deposits are found only in the formations mentioned above.

H. Römer has already indicated that the petroliferous sandstone at Ödesse, in Hanover, contains up to 17 per cent. of limestone. B. Walter also mentions that the rich Ropianka oil sands in Bukowina are rich in limestone, and surmises that by the dissolving of the calcium carbonate the porousness increases. In fact, these strata are rich in calcite veins. These statements deserve further consideration, as they may prove useful in practice.

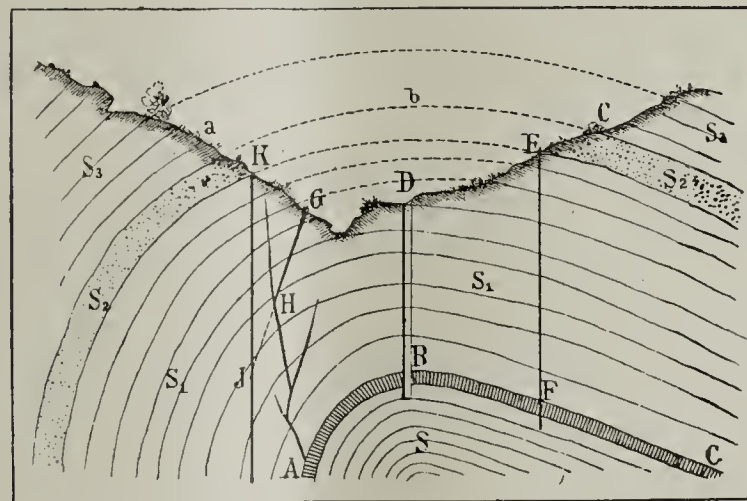
The investigations of Mr. T. F. Carll have proved that the oil-sand of Pennsylvania contains oil to the extent of one-tenth of its volume; he supposes that under pressure this capacity can be increased to one-eighth of its volume.

The occurrence in the Carpathian fish and menilite shales has to be classed among primary deposits, and the same applies to the largest part of the North German deposits in the Jura and Weald formations.

The oil in these primary deposits is in most cases, especially owing to the gases formed in the transformation process, is under great pressure, which when the oil deposits are drilled into is capable of throwing the heavy drilling tools from the bottom of the well to the surface.

In consequence of this internal pressure, petroleum has the tendency to deviate in various directions. When

FIG. 5.



in the vicinity of the primary deposit, vertical or horizontal, there is a porous formation, the oil penetrates into it, and this increases the thickness of the oil deposits. This process may, however, also result in the oil being distributed over such a wide area that the flow of oil into a well is too small to make its exploitation profitable.

The gases which can penetrate the rocks more easily, and therefore go further, are in all oil fields a sign of the near presence of oil deposits.

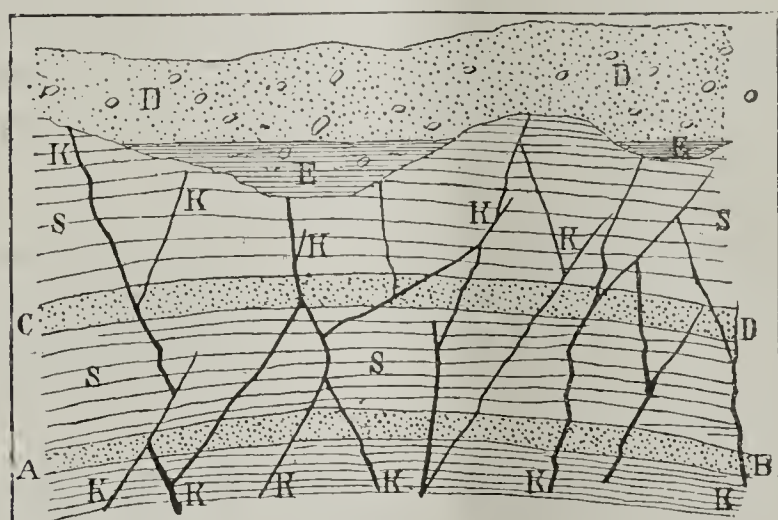
In these wanderings the oil has many opportunities for evaporation, as a result of which erstwhile prolific deposits were transformed into a bituminous rock, which may also be the outcome of insufficient quantities of

organisms capable for petroleum formation, or that the conditions favouring the transformation process were not present. This partly explains why this series of strata can only be partly oil bearing.

We have just learned of processes which render possible the widening of the original area of primary petroleum deposits, and, in the majority of such cases, it would be difficult to fix the limits of the original deposits. The widened deposits must, however, like the original deposits, be of a sedimentary type, as the surrounding porous rocks are also deposited in strata.

The pores of solid rock, however, do not give the oil

FIG. 6.



any wide scope for extending. Experiments made with rocks, into which water was introduced under pressure, justify this view. If we take further into account that the pores in the rock are mostly filled up with water which has a heavier specific gravity, and the resistance from capillarity and friction, we find that there must be an enormous pressure to enable the oil to penetrate into the rock for any considerable distance. This question is considered in detail lower down.

The conditions are more favourable in loose masses, such as sand, gravel, etc., the spaces in which are larger than in compact formations, and therefore are more easily penetrated.

The issue of the oil from the primary deposit is more easy along crevices which communicate with the deposit, and the more so the larger and more numerous such crevices are. The oil enters these cracks, fills them up and under pressure ascends, sometimes right up to the surface, thus forming a natural oil spring. These occurrences in crevices, as are found in some places in Ohio and West Virginia, are the secondary deposits. They represent crevices filled up, and take their form from the form and size of the crevices. These crevices frequently change their thickness, direction and dip, they divide and unite again, and generally their geometrical condition changes more frequently than that of primary deposits, which lie in accordance with the position of the surrounding strata; for this reason any disturbances in the oil stratum, such as windings, folds, etc., can be judged from analogous phenomena in the adjoining strata, which is of great importance in drilling. The risk in prospecting in a primary deposit is incomparably smaller, and the possible success and the amount of time and capital which it will involve more surely calculable than in secondary deposits, as is shewn in the accompanying sketch (Fig. 5).

The primary deposit A B C (Fig. 5) runs parallel with the rocky strata accompanying it S S₁ S₂. By the outcrops of the latter an idea can be formed as to the direction of the oil deposit, when once it has been reached at one spot, as, for instance, in shaft B or borehole D B, as it, of course, must be parallel to the line A B C. If a borehole would then be begun at E, its depth along the line E F can then be fairly accurately determined. This knowledge is important, not only as an indication of the time and money which the drilling will take up, but also to determine the method of work, starting diameter, etc. In addition, we know, when at a certain depth the oil deposit has not been struck, and when a study of the geological conditions has proved that between B and F there are no disturbances such as a deviation, that the oil deposit does not reach so far, but has already overturned before that.

The technical conditions are quite different in the case of secondary occurrences. At G an oil spring was discovered, corresponding to a crevice, and the latter was laid bare; it was proved that it took a slanting direction in the line G H. Accordingly a borehole was started at K in the hope of striking the oil crevice at J. The crevice, however, deeper down bends away, a circumstance which not even the most careful geological study could foresee; the borehole entirely misses the oil crevice and remains sterile, if the primary deposit is too deep to be reached by the drill. Should several such failures occur in course of prospecting operations, a field, probably containing large oil deposits, is abandoned after heavy sacrifices in money.

The occurrence of petroleum in crevices is not therefore tied up to defined geological levels or any definite petrographical properties of the formations. It is clear from the above of what great importance it is to deter-

FIG. 7.



mine the question as to whether the oil in the explored region is in primary or secondary deposits.

When the pressure is sufficient, the oil will mount up the crevices up to the surface; it is also possible when the conditions of the ground are favourable, large accumulations of oil are formed on the surface, such as, for instance, the pitch lake in Trinidad. When the outcrop or crevice K (in Fig. 6) is covered by loose formations (gravel, sand, debris, etc.), the oil will spread in these formations and form accumulations EE, which in Canada are called "surface wells"; when the issue of the oil from crevice K is on a slope covered with debris (Fig. 7), the oil will flow down along the bottom of this covering, and only at the foot of the latter it comes on the surface in the form of spring Q, a possibility which must be borne in mind when prospecting for petroleum. Such accumulations of petroleum close to the surface

are also secondary deposits, which are, however, similar to primary deposits, and the conditions for prospecting in them are the same as for primary deposits.

When crevice K (Fig. 7) passes through a bank or series of strata of very porous rock, the oil accumulates in the latter, forming secondary deposits, which in most cases are indistinguishable from primary deposits, and possess the same conditions for prospecting as the latter. For instance, it is accepted by many authorities that the rich oil strata of Pennsylvania which are found in sandstones, and conglomerates lying parallel with stratified sandstones, are not primary but secondary deposits.

(To be continued.)

THE GEOLOGY OF THE ILLINOIS FIELD.

Mr. W. S. Blachley, State Geologist of Indiana, in referring to the Illinois field, which has undergone such great development recently, says:—"That portion of the State producing crude oil and natural gas in commercial quantities on May 1st this year, comprises a strip of territory about 40 miles in length and 12 miles wide, extending from Westfield, Clark county, a little east of south to below Oblong, in Crawford county. The strip of territory comprises parts of three counties—Clark, Cumberland and Crawford—which lie at or near the Indiana boundary of the State. One fallacy believed by a number of intelligent operators in the Casey field is, that that field will be found to extend northward and to connect up with the shallow developments in the corniferous rocks of Jasper county, Ind. Anyone with the slightest knowledge of geology should know that this is impossible. The corniferous rocks belong to the Devonian age, and were in existence millions of years before those of the South-western Illinois were formed. They dip strongly to the south-westward, and if represented near Casey, where the oil and gas are found at 400 feet, they are 1,700 or more feet below the surface. Neither is the Casey sand continuous or synonymous with that found productive near Princeton, the latter being found in a Huron sandstone or lower carboniferous age. In Illinois, as in Indiana, there are absolutely no surface indications which denote the presence of either gas or oil in paying quantities in the underlying rocks. Gas and oil are found in paying quantities in the south-eastern field only at depths ranging from 300 to 1,100 feet below the surface, and the conditions are such that no man can, with certainty, locate in advance a productive well in any portion of the field. In many places bubbles of gas may be noted as escaping from some land, spring or stream, or a scum of oil be found floating upon the surface of some pool of water. To the average beholder, these are thought to be surface indications of a larger supply beneath."

PETROLEUM MOVEMENTS IN AMSTERDAM AND ROTTERDAM.

The following were the movements of petroleum products at the ports of Amsterdam and Rotterdam during September:—

	Amsterdam.	Rotterdam.
	Barrels.	Barrels.
Stocks on September 1st	91,664	225,227
Imports in September	51,286	144,132
Deliveries in September	46,279	116,302
Stocks on September 30th	96,671	253,057

BATOU M EXPORT TRADE IN AUGUST.

The export trade of Batoum during August was very quiet, being dependent on arrivals of oils from Baku, which, owing to the strikes, were very limited. The total exports for the month amounted to 2,181,000 poods, of which 1,200,000 poods was accounted for by the two case factories which worked uninterruptedly, namely, Mantascheff and Siderides. The remaining exporting firms, including Nobel, Rothschild and others, had left for their share less than 1,000,000 poods. It may be mentioned by the way that the Rothschild Co. did not export at all in August. In view of the abnormal conditions under which the arrival of supplies from Baku was placed, the export had to be carried on mainly from stocks, which in the case of some firms were entirely exhausted, and with others were reduced to a minimum.

The following figures shew the movements of petroleum products at Batoum in August:—

	Arrivals.	Exports.	Stocks on
	Poods.	Poods.	1st September.
	Poods.	Poods.	Poods.
Refined Kerosene	1,580,000	1,309,000	1,374,000
Kerosene Distillate	—	—	24,000
Solar Oil	287,000	432,000	349,000
Machine Oil	259,000	333,000	452,000
Spindle Oil	3,000	56,000	38,000
Cylinder Oil	13,000	16,000	15,000
Vaseline Oil	—	44,000	29,000
Lubricating Oil	—	—	18,000
Mazout	39,000	157,000	176,000
Total	2,181,000	2,347,000	2,475,000

The greatest decrease occurred in the export of kerosene in bulk, the total amount of which did not exceed 675,000 poods. A little more satisfactory was the case oil export, which reached 634,000. In spite of the high prices which prevailed for cases in August, the demand for the same remained firm. About 45 per cent. of the total exports is represented by special oils. According to the countries of destinations the exports were divided as follows:—France, only 45,000 poods, Belgium and Holland, 98,000 poods; Italy, 219,000 poods; Germany, 32,000 poods. The export to Great Britain was not large, not more than 878,000 poods. One cargo of bulk oil, 107,000 poods, was shipped to Alexandria. Nobel's have shipped 42,000 poods of oil in barrels to Vladivostock. To Turkey and the Balkan States there were exported 639,000 poods. Shipments to home ports and the Far East were almost entirely absent.

OIL TENDERS FOR THE NORWEGIAN RAILWAYS.

The British Acting-Consul at Christiania transmits a copy of an announcement issued by the Norwegian Main Railway authorities inviting tenders for the supply of various oils, etc. Tenders in sealed envelopes marked "Anbud paa Olier, etc.," and addressed to the "Norsk Hoved-Jernbane, Overbestyrerens Kontor, Christiania," will be received up to 11 a.m. on the 23rd November. Samples of the articles tendered for are to be delivered at "Maskiningeniorens Kontor, Oslo Gade 3, Christiania," by 2 p.m. on the 10th November. The announcement (in Norwegian) containing particulars of the oils required may also be seen at the offices of the Commercial Intelligence Branch of the Board of Trade.

LATEST FROM THE GALICIAN OIL FIELDS.

DETAILS OF RECENT OPERATIONS.

The production of the Boryslaw field in September has been estimated at 20,000 tons. The celebrated Klaudyusz well has at last ceased to yield; five-inch pipes have been lowered into it, and it is being further deepened. The Galicia Co. is obtaining 4,000 tons of oil per month from its two newly-completed wells.

The completion of several important boreholes at Tustanowice last month brought about a substantial increase in the production. The September output was the largest monthly output on record, and approximate figures of the production in Tustanowice, including Wolanka, place it between 28,000 and 30,000 tons, some estimates placing it above this figure.

On the Litwa property, there is to be recorded a decline in the yield of well No. 1, which now produces 110 tons daily. Well No. 2 has for some time been holding steadily at 40 tons daily. On the Triumph property, in well No. 1, a hard sandstone was struck, and during a whole week only some six metres could be traversed. The depth of this well is about the same as of the Litwa well No. 1, but its yield at present does not exceed 60 tons daily. The well of the Galician Naphtha Co. (Baroness Popper and Co.) is said to be producing steadily 120 tons daily. Well No. 1, on the Salamon plot is being deepened, some 30 metres having so far been drilled, chiefly in oil sandstone. The production of this well is growing very slowly, and now stands at about 30 tons daily. Messrs. Laupenmühlen and Co. are drilling several boreholes in very favourable positions.

The price of hermetical casing in Galicia has recently been raised by 5 per cent. This is the fourth advance in the price of this article in the course of this year, and constitutes a heavy burden on the petroleum industry, inasmuch as each borehole required from 30,000 to 40,000 kronens' worth of hermetical casing.

In the Potok locality, two firms are operating—the Hannover-Galician Naphtha Co. and the Potok Naphtha Co. The former is drilling four wells in Potok and two wells in adjoining localities. The monthly output of this company is now about 900 tons.

The Potok Co. is drilling two wells. Well No. 31 is 603 metres deep, with six-inch casing. Well No. 32 is 660 metres deep, and shews already traces of gas and oil. The last-named well is situated at the southern end of the Potok field. The total production of the Potok Co. obtained by pumping is 300 tons per month. Generally, the production of oil at Potok is declining, and only a rise in price can infuse fresh life into boring operations in this locality.

At Szumina, a new firm called the Walewska Boring Co. has established itself about two kilometres south of the property of the Sobieski Co., and will shortly commence drilling.

The Spolka Ludowa Co. has stopped its well at 235 metres at Strzelbice. Fresh capital is now being sought, and when this has been found boring will be resumed.

THE USE OF KEROSENE IN RUSSIAN VILLAGES.

The last two issues of the *Viestnik Finansov* contains a very instructive article by Mr. M. Antipoff, embodying the results of his investigations into the extent of the use of kerosene in Russian villages, and the conditions surrounding its use. The figures dealt with by the author relate only to the province of Kursk and have been collected by the Kursk Provincial Zemstvo. They are nevertheless characteristic, inasmuch as they represent the state of affairs in one of the most thickly populated and advanced provinces of Russia. If in some provinces the conditions may be more favourable in the majority they will be found below those prevailing in the Kursk province, which may, therefore, be taken as fairly representative of the whole of Russia.

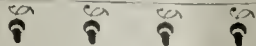
Mr. Antipoff summarises the results of his investigations in the following words:—(1) The greater the material well being of a household the more light they use, and consume more kerosene; (2) Families engaged in other pursuits besides agriculture consume more kerosene compared to the purely agricultural families; (3) Families, which contain persons able to read and write or attending school, consume much more kerosene than others; (4) The average consumption of kerosene per peasant family amounts to 43.2 lbs. per annum and about 7.2 lbs. per person; (5) The average price of kerosene in the villages is 1 rouble 84 copecs per pood, which means that the villager pays more than the townsman by 64 copecs per pood, taking the average price of oil in the towns at 1 rouble 20 copecs.

The author examines in detail the causes of the high prices ruling in the villages for kerosene, and in connection with this supplies the following interesting facts. In villages where there is only one shop the price of kerosene on the average for the province is the highest, namely, 4.8 copecs per Russian pound; in villages with two shops the average price is 4.7 copecs; while with four or more shops it is 4.3 copecs. The price of kerosene also fluctuates widely according to the distance of the village from towns or stations, which accounts for a difference of from 0.8 to 2 copecs per pound.

There are no definite data to shew the quality of the kerosene sold in the villages, but it is safe to conclude that the oil generally supplied to the villages is not of the first quality.

The Provincial Zemstvo has established a number of oil depôts in the larger villages. An extension of the work in this direction would be a very effective means of regulating the price of kerosene in the villages. A great deal could also be done by private commercial enterprise. There are cases, for instance, of certain enterprising district managers of oil distributing firms who have organised the distribution of kerosene in villages by means of road tank cars, and in this way regulated prices of oil in the villages in a normal way and at the same time greatly extended the sale of their oil in their district. Here in England as well as in other countries of Western Europe, the distribution of oil in road cars has become the general practice of the trade, and there can be no doubt that the adoption of this method of distribution in Russia would almost immediately yield good results.

THE "SHELL" TRANSPORT AND TRADING COMPANY, LIMITED.



Sir Marcus Samuel explains the proposed amalgamation with the Royal Dutch Company.

The annual general meeting of the shareholders of the "Shell" Transport and Trading Co., Ltd., was held on Tuesday last at Winchester House, Old Broad Street, E.C., the Chairman of the company—Sir Marcus Samuel, Bart.—presiding.

The notice convening the meeting having been read by the Secretary—Mr. E. A. Smith-Rewse—the annual report was taken as read. It was as under:—

"Including the balance brought forward from 1904 and after providing for depreciation, management, and other expenses, including the loss on the European business, the balance standing to the credit of the profit and loss account is £267,965 4s. 11d., out of which the preference and ordinary dividends (absorbing £150,000) have been paid, leaving a balance of £117,965 4s. 11d. at disposal.

"Your directors recommend that out of this sum £19,109 18s. 1d. be appropriated to the extinction of the outstanding balance of cost and expenses of the issue of preference shares, and having sold at par the shares in the Petroleum Producte Actien Gesellschaft of the nominal value of 3,000,000 marks, they also recommend writing off £13,500 from the cost of these shares, carrying forward to the 1906 account £85,355 6s. 10d.

"The results of the trading of 1905 were adversely affected by the war in prices which prevailed in portions of the East, but conditions have since improved.

"Your directors regret that owing to the continuance of the acute competition in kerosene on the European markets, they seeing no prospect of profitably continuing that trade, decided to dispose of the company's interest in the Petroleum Producte Actien Gesellschaft and to sell four of the steamers engaged in the business. The realisation of the remainder of the company's stocks consigned to the Petroleum Producte Actien Gesellschaft will be completed on the 1st November.

"The extension of the Eastern business has necessitated the calling up by the Asiatic Petroleum Co. of £300,000 additional capital, of which your company have subscribed their third share.

"The production of the Borneo fields continues satisfactory. During the current year full use has not been made either of the productive powers of the fields or of the refineries, due to a large accumulation of stocks at the beginning of the year and to current marketing conditions.

"Shipments to the 6th instant this year, as compared with similar periods of 1905 and 1904, are approximately as follows:—

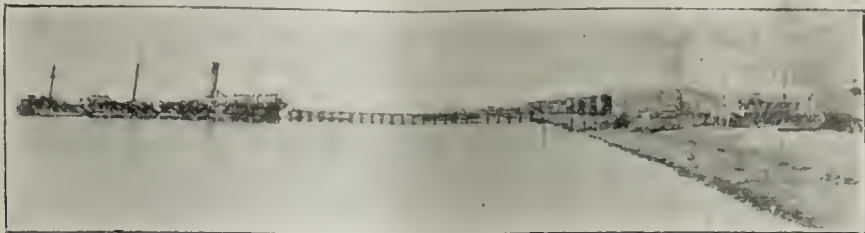
	1906.	1905.	1904.
	Tons.	Tons.	Tons.
Kerosene	92,582	85,694	50,638
Liquid Fuel	114,904	110,658	93,810
Benzine	12,673	3,550	—
Crude Oil and Sundries	8,405	33,839	9,950

"The directors of the Nederlandsch Indische en Handel Maatschappij have decided to convert their bond indebtedness into ordinary shares, and for this and other purposes to increase the capital to 20,000,000 florins. The shares as issued will be offered to the existing shareholders.

"The proposed arrangements for the carrying out of the amalgamation of your interests with those of the Royal Dutch Co. (Koninklijke Nederlandsch Maatschappij tot Exploitatie van Petroleumbronnen in Nederlandsch Indie) of the Hague, are progressing, and at the earliest possible opportunity particulars will be communicated to you and your sanction asked for their completion.

"On the invitation of the directors, Mr. Robert Waley Cohen has joined the board. Mr. H. E. Arnhold having resigned his seat on the return of Mr. P. Arnhold from his visit to the East, the latter gentleman has rejoined the Board. The retiring directors, Sir Marcus Samuel, Bart., and Messrs. Benjamin and Best (all being eligible), offer themselves for re-election."

In moving the adoption of the report, Sir Marcus Samuel said:—I now have to submit to you the eighth annual report of the "Shell" Transport and Trading Co., Ltd. From the balance sheet you will see that, including the balance brought forward from the year 1904, there is at the credit of profit a sum of £525,962 8s.



INSTALLATION AT KOBE, JAPAN.

Out of this an amount has been placed to the provision for depreciation of steamers and installations, which raises this fund to the large sum of £600,699 3s. 5d.

We have written off £10,000 from the cost and expenses the issue of preference shares and the whole of the balance of the American expenses, and as we ask your consent to write off out of the amount which we might otherwise have carried forward, £19,109 18s. 1d., you will, no doubt, note with pleasure that this heavy call upon our profits will not recur.

Although the sum of £13,500 which we receive less than the cost of our shares in the Petroleum Producte Actien Gesellschaft should not really fall to the charge of the past year, because they have only just been realised, yet, for reasons which I shall explain to you, we have no hesitation in adopting this course, as well as of writing off the whole of the losses in the European business ascertained to date, instead of charging four months of the loss to the current year's profits. We shall, therefore, carry forward the sum of £85,355 6s. 10d.

With the raising of the capital of the Petroleum Producte Actien Gesellschaft to £600,000, we, declining to contribute our share, necessarily lost all control in the conduct of the business, and the shockingly bad results which have been attained have arisen very largely from the management of the business on the Continent, over which we had practically not even supervision, and the results shewing in some places no return whatever for the oil, were only communicated to us months after the event. Your directors are of opinion that they would have had some redress against their co-partners for this state of things, but considering that a bad settlement is better than a successful law-suit, they decided to sell their shares in the company to their co-partners, and also to sell them four of their steamers, viz.: the "Pinna," "Euplectela," "Turbo" and "Rocklight," to obtain employment for steamers having been one of the main inducements to the company to enter the European business.

We found ourselves in an entirely false position, because we were only merchants buying oil and having to consign it, and we could not compete successfully with other European organisations in oil who market their own productions, and must accept the best price they can get for it. We can only congratulate ourselves at having obtained par value for shares, the holding of which would have involved us in further losses, because with the sale of the shares and the steamers we have cancelled all contracts involving us in the liability to consign oil to the companies for sale.

In my concluding remarks in December of last year, I warned you that the average prices realised in the East had been the worst on record, and it is scarcely surprising that, under these circumstances, as a result of the competition we had to meet, our profits have been reduced, but I was also able to assure you that the prospects for 1906 were very much better, and you will certainly learn with satisfaction that those expectations have been realised.

We have subscribed and paid our third share of the additional capital raised by the Asiatic Petroleum Co., Ltd, owing to the natural development of their business, and this is an entirely satisfactory investment.

Referring to the Borneo fields, I invite you to note the statistics given in the report, by which you will observe that we have materially increased our shipments of kerosene as compared with 1905. We have also increased them to a small extent in liquid fuel, and to a very considerable one in benzine or petrol—for, in

accordance with our anticipations, the time has arrived when the splendid qualities of our heavy petrol are meeting with the recognition they deserve.

As we did not give you certain other statistics, I take this opportunity of doing so. We have at present a stock of:—Crude oil, 35,039 tons, against 30,505 tons last year; kerosene awaiting shipment, 19,416 tons, against 19,784 tons last year; benzine, 5,233 tons, against 4,610 tons last year; liquid fuel and residues, 17,550 tons, against 8,794 tons last year; or a total of 77,238 tons, against 63,693 tons at the same time last year. These stocks could have been very largely augmented had it not been absolutely necessary to destroy upwards of 39,500 tons, in consequence of insufficient offtake and lack of storage.

It is intended to convert the bond indebtedness of the Nederlandsch Indische Industrie en Handel Maatschappij to ordinary shares, and to increase the capital to 20,000,000 florins, this being rendered necessary by the constant expenditure demanded in order to make the most of our fields. During the current year the company has spent on refinery extensions, storages, etc., £119,596 5s. 6d.; and on exploration account, £11,104 19s.; whilst they have written off in profit and loss for amortisation of these items £53,707 4s., being strictly in accordance with the scale agreed by this company. They have also added £16,207 18s. to reserve, raising this figure to £23,306 4s. 10d., carrying forward a balance of £1,834 1s. 9d. This increase in the company's capital is rendered advisable in consequence of the dividend upon the shares, owing to the nominally small capital appearing too high, and if it were allowed to continue in its present state might lead to the impression that an unduly high return was being obtained on the shares, which is not the case, seeing the very large sum invested in the business.

It was my duty to inform you on previous occasions that the kerosene which we are able to make from Borneo oil is not what is called standard quality, and the advantages of selling it mixed with the better grades supplied by other producers to the Asiatic Petroleum Co. would be very considerable. I cannot too clearly express my own conviction, and that of my colleagues, that our property in Borneo is an immensely valuable one, but the fact that our business depends upon one territory and one refinery only has led us to favourably consider an amalgamation with the Royal Dutch Co., which among other advantages, will give us an insurance fund against any possible falling off in the production of our own fields, and what we look upon as a more probable danger—the destruction of our storage and refinery by fire, for in these respects the Royal Dutch are in an invulnerable position. That company, in fact, has gradually absorbed nearly the whole of the producing and refining companies of the East, viz., the Moeara Enim, the Moesi Illir, and the Sumatra-Palembang.

Owing to our alliance with them in the Asiatic Petroleum Co., Ltd., we have been able to realise how carefully and ably their business has been conducted, and at the proper time we shall place before our shareholders full particulars of their company's accounts. Their principal wealth is in their territories and refineries, and their assets in steamers and installations certainly do not compare in value with those of the "Shell" Transport and Trading Co., Ltd. On the other hand, the character of their produce enables them to make a very much larger net income, and your directors have naturally satisfied themselves that the proposed division of revenue, as to 40 per cent. to this company and 60 per cent. to the Royal Dutch, is a perfectly equitable one, which in due course they will be prepared to recommend for your acceptance, but in the circular which we issued inviting you to dispose of a certain proportion of your holdings, we were at great pains to explain to you that we have only, so far, signed an arrangement to make an agreement subject to many contingencies, and I am unable to inform you to-day that negotiations are absolutely concluded, for you will easily realise that in assets of the magnitude possessed by both companies a most careful investigation by both

sides is necessary, in order that we may each thoroughly know the nature of any obligations which we take upon ourselves, either as attached to the concessions or installations. These examinations are now progressing, but the exact legal form to be adopted to give effect to the agreements arrived at has not yet been decided, and presents considerable difficulty. One of the principal things which we both have to consider is the avoidance of a dual income tax. The profits of the Royal Dutch Co. available for distribution may be put at about £600,000. Naturally these have not been subject to the English income tax, and as at the present rate it would involve a charge of something like £30,000 a year, the directors of that company cannot consent to mulct their shareholders with such a burden. Then we certainly must avoid the payment of Dutch income tax upon any portion of our profits not arising from Dutch possessions, and whilst our mutual lawyers are endeavouring to solve these questions, I cannot take the responsibility of giving you an assurance that the matter is definitely concluded when some hitch may arise which would prevent its fulfilment.

By holding 60 per cent. of the shares in the middle companies, the control of the business will pass, in fact, into the hands of the Royal Dutch Co., and under these circumstances your directors have felt it absolutely necessary that that company should hold a substantial stake in the "Shell" Transport and Trading Co., Ltd., and hence we have agreed to provide 500,000 shares at 30s. per £1 share ex-dividend for the current year. I hope that our fellow shareholders will feel that Messrs. M. Samuel and Co. have acted in a liberal spirit by giving the offer to their co-shareholders of disposing of any interest which they may desire to realise, whilst themselves undertaking to supply the necessary number of shares to enable the amalgamation to go through.

One of the conditions of the agreement is that the "Shell" Co. shall provide £200,000 of fresh working capital for the combine, the Royal Dutch Co. contributing £300,000, and were we to distribute as dividend the amount which we have earned in 1906, it is quite inevitable that we should have to raise further capital to do so, and the Royal Dutch Co. have made the reasonable stipulation that we shall limit the distribution for this year to five per cent. To those who are permanent shareholders in the "Shell" Co. it makes very little difference whether we receive the dividend this year or next, and I have repeatedly frankly stated that the board of a company like this cannot, and must not, consider the interests of these few shareholders who simply speculate in the shares and go in and out of them.

I cannot add usefully any information to what I have now given, except to state that should the agreement go through on the lines designed, the interests of the preference shareholders have been carefully guarded, and will form, for ten years at least, the first charge on the entire profits of the amalgamated companies, and subsequently on our own proportion. As we should in any case have had to spend upwards of £200,000 in erecting a wax plant and creating facilities for utilising the very valuable bye-products in our Borneo oil, it will be seen that there is no hardship for us in contributing the working capital for the combine which we have agreed to provide.

Reverting for a moment to the results of 1906, the shareholders will be very glad to learn that the year has been a most prosperous one so far, and although we only propose to distribute on the 1st January next an interim dividend at the rate of five per cent. per annum, we have the greatest hope that, when the accounts are made up and presented for 1906, should the amalgamation with the Royal Dutch Company not be completed, it will be the pleasant duty of the directors to recommend a further dividend for the year.

I now formally move the adoption of the report.

Mr. A. V. D. Best seconded the adoption of the report and balance sheet.

Mr. Howell enquired if the offer which the directors had made to the shareholders would hold out until the agreement was signed.

The Chairman replied that would not be so. They had given the shareholders the option of contributing their portion up to the 31st inst. Those who did not decide to take advantage of the offer would be unable to do so afterwards.

Mr. Howell: And suppose they go in for their portion on the 31st., how long will it be before you let them know.

The Chairman said the agreement had to come into force on January 1st next, but the directors could not let the shareholders know until everything was signed. So far the number of shares which the directors had placed at their disposal was 6,378, which did not help very much toward the 500,000. Of course, if the agreement did not go through by the end of the year, then the option lapsed entirely.

Mr. J. A. Chartier said it appeared to him that the balance sheet required a little more explanation than Sir Marcus Samuel had given them. He could not, for instance, for the life of him see how it was possible to say that the cost of issuing preference shares should come as an asset. It was certainly a loss, and so in his opinion it was a most extraordinary thing to put it as an asset. It ought to go on the debit side. Then, too, he desired to know with regard to the *Produkte Actien Gesellschaft*, whether the amount written off actually covered the whole losses the company had made. Then also, had sufficient provision been made to cover any possible loss with regard to the four steamers which the company were selling. Proceeding to speak of the balance sheet, the speaker said that he found they carried forward a sum of £107,815 17s. last year, but this they were only proposing to carry forward £85,355 6s. 10d. Therefore, it seemed to him, that they had to take into account that difference of £22,500 before they considered the dividend they had to declare. But the directors appeared to have taken that so that they could pay the five per cent. on the ordinary shares. The sum really earned only came to $3\frac{3}{4}$ per cent.

The Chairman said he did not wish to interrupt the speaker, but he was entirely wrong. (Laughter).

Mr. Chartier: Ah, then I apologise. (Laughter).

The Chairman, in replying to the points raised by the previous speaker, said he welcomed such questions. The cost of the issue of the preference shares was properly charged, and was represented by the asset of £1,000,000 sterling which the company was not liable to repay; that was to say, they issued shares for £1,000,000, and they had, in his opinion—because they were very strong—written off the cost of the preference shares out of their profits. It did not stand as an asset; those 1,000,000 shares represented £1,000,000 of capital, and they had their earning powers. The fact that the company had written that off out of their profits only shewed that they were very strong. They were not obliged to do it; it amounted to something over £60,000, and the income-tax commissioners had always refused to allow them to consider that as part of their profits. As to the *Petroleum Produkte Actien Gesellschaft* loss, that was more than covered by the amount which they had put aside. The four steamers, the shareholders would be glad to learn, were sold at a valuation fixed by Sir Alfred Jones, acting as arbitrator. The amount of Sir Alfred Jones' award was a sum many thousands of pounds more than the amount at which the steamers stood in the company's books; but as the result of the compromise, the amount which they obtained for those steamers was really £150,000, which would about clear the cost in the books. If they had got the price on which they were valued, they would have shewn a very large profit indeed.

Mr. Arthur H. Brandt asked if there was any necessity for writing off the cost of issuing the preference shares, and whether the directors considered that it constituted a proper asset to carry forward?

The Chairman said that the cost of issuing the preference shares was an asset. He thought that every business man would agree with him that it would be wholly unnecessary to write the amount off in any one year; indeed, they might have taken a much longer

time. The preference interest would be a first charge on the entire concern for ten years, and after that it would still be a prior charge on the ordinary profits of the company. The preference shareholders would also have the same security they possessed now.

The resolution was then put, and carried unanimously.

Mr. Black then proposed the re-election of the retiring directors—Sir Marcus Samuel, Mr. H. N. Benjamin, and Mr. A. V. D. Best—the motion being seconded by Mr. Jardine and agreed to.

The Chairman then moved that the appointment of Mr. R. Waley Cohen and the re-appointment of Mr. P. Arnhold to a seat on the board should be confirmed, the resolution being seconded by Mr. Benjamin and agreed to.

The auditors having been re-appointed at the same salary as heretofore, Mr. H. B. Sedgwick proposed a vote of thanks to Sir Marcus Samuel and the other directors for the successful manner in which they had conducted the affairs of the company. The board had had a year of very hard work, yet they had done it well, and he was sure the shareholders would feel gratified at the report which had been presented that day.

Mr. Baron seconded the motion, which was carried with acclamation.

In reply, Sir Marcus Samuel said that both his colleagues and himself greatly appreciated the vote of thanks that had been passed. He could assure the shareholders that they all devoted their best energies to the business, and they had the greatest possible inducement to do so, for they were by far the largest shareholders. He hoped that they might be able to call the shareholders together before the end of the year, to confirm the agreement with the Royal Dutch Co. He would look upon that as really being the crowning success of this company, because they would be absolutely unassailable if they had behind them the very large production which the united companies controlled. He was most anxious at this stage, as the shareholders could quite understand, not to leave the shareholders in the Royal Dutch Co.—they had to confirm the agreement also—under the impression that this was a one-sided bargain. It was nothing of the sort, for the Royal Dutch would get quite as much as this company would; but it was clear that they would by the amalgamation have the advantage of economies, and it would also do away with all friction which might exist in the working of the two concerns. That was one of the reasons which guided the directors of both undertakings to take the course which they were now following.

This concluded the business.

THE GROSNY PETROLEUM PRODUCERS' CONFERENCE.

The tenth annual conference to the Grosny Petroleum Producers will take place in the early part of next month. The following are the principal questions to be discussed:—To determine the rate of royalties to be levied in 1907; to ask the Minister of War to determine the royalties to be paid on the concessions for the second period of 12 years, the first period of 12 years expiring in July, 1907; allotment by the provincial administration of a site for a workmen's village; *re* asking the district administration to assist in obtaining from the Vladicaucasian railway payment of arrears of the tax for the common needs of the petroleum industry; to free the oil used as fuel from the payment of royalty to the Cossack administration; organisation of the recovery of crude oil from drainage canals; to petition the Government to lower the railway rate for Grosny crude oil and residuals to $\frac{1}{120}$ copek per pood per verst; and the organisation of elementary mining education at the Grosny oil field.

PETROLEUM DEVELOPMENTS IN PERU.

Mr. A. L. M. Gottschalk, the Consul-General at Callao, has recently issued a report bearing upon the country of Peru. In this he says that apart from Peru being undoubtedly the most highly mineralised country in South America, it is probably the one that offers the greatest future to foreign investment in mineral enterprises.

Proceeding to speak of the petroleum developments, the Consul-General says that mineral oil has thus far been found only in the departments of Tumbes and Piura, in Northern Peru. He learns, however, that there is also an American concern boring at Huancane, department of Puno, in Southern Peru, but with what result he has been unable to ascertain.

There are three enterprises actively engaged in the Peruvian petroleum field to-day, the London and Pacific Petroleum Co., the Industrial de Zorritos and the Peruvian Petroleum Syndicate.

The London and Pacific Co.'s output in 1904 was 35,000 tons of crude petroleum and 40,000 ten-gallon cases of kerosene. The concern exported to Chili alone last year some 11,000 tons. Its wells have been bored to a depth of 1,700 feet. It has, he gathers, good modern installation and has constructed a stretch of narrow-gauge railway between Talara and Negritos (some 20 kilometres). It also owns steamers.

The Zorritos Co., whose manager is Mr. Faustino G. Paiggio, of Callao, in 1904, produced 2,068,094 gallons of crude oil; there were refined 36,158 cases of kerosene; 3,605 cases of gasolene, benzine, etc.; and 10,000 gallons of lubricating oil. The concern owns the steamer "Ezio," which makes some 15 trips yearly up and down the coast, carrying oil cargoes. It has five drills actively at work at new wells. Mr. Piaggio assures the Consul-General that petroleum has a future in that district, as new filterations have been discovered at 1,500 to 2,000 feet depth. The Zorritos Co. has some 200 men at work in its plant.

The Peruvian Petroleum Syndicate inscribed in the last Mining Register some 170 claims, at Lobitos, in the district of Paíta. It has 11 wells of which the deepest is 2,275 feet; three of which he is assured yield four tons of crude petroleum daily.

The number of petroleum claims recorded in the last issue of the Peruvian Padron de Mina (Mining Register) during the first six months of this present year is 743.

A MAMMOTH COMPRESSED-AIR PLANT AT JENNINGS.

The current issue of the *Oil Investors' Journal* makes reference to what it describes as the largest compressed air plant that has ever been installed for oil field work. It is now being assembled by the Jennings Heywood Oil Syndicate in conjunction with Caffery and Martel, at the Jennings field. It will consist of 18 compressors having a capacity of 11,500 feet per minute, power for which will be supplied by a battery of 50 boilers of 40 horse-power each, or a total of 2,000 horse-power. Included in the air plant will be machines of various makes

—the Laidlaw-Dunn-Gordon, the Leyner, the Rand Drill, the American Well Works, and the Ingersoll-Sargent. There are 10 of the last-named make which were especially built for service in the Baku (Russia) oil fields. The uprising in the Russian oil fields caused the order to be countermanded and the machines were left upon the manufacturers' hands. The syndicate obtained the entire lot at a figure much below the original contract price. Each of the 10 machines has a capacity of 650 feet per minute at a uniform pressure of 500 pounds. They are made extra heavy, and were intended for the operation of deep wells in Russia—deeper even than the Jennings wells, which are between 1,900 and 2,000 feet.

THE CANADIAN OIL FIELDS, LIMITED.

DIRECTORS' REPORT.

The report of the directors of the Canadian Oil Fields, Ltd., which is to be presented at the fourth annual ordinary general meeting, to be held at the offices of the company next Friday, has been issued to the shareholders by Mr. H. J. Hardy, F.C.I.S., the company's secretary. It states that the company's properties have been maintained in good working order during the past twelve months, and pumping has proceeded uninterruptedly, the total production of oil during the year amounting to 27,016 barrels.

The old wells have given a very satisfactory yield as compared with previous returns, and whilst Moore has, as usual, largely contributed to the total production, the natural decline in the earlier well on that plot (which gave such a prolific yield when first drilled) has necessarily affected the aggregate results. They continue, however, to shew a very handsome return upon the capital invested there, and the directors look forward to an early resumption of drilling immediately further funds are available. The effect of the lesser production upon the earnings has been minimised by a material reduction in the aggregate working expenses in Canada, and every effort is still being made towards effecting further economies.

The price of oil (inclusive of the Government bounty) fluctuated during the year between \$1.80½ per barrel and \$1.90½ per barrel, the present price being \$1.82½ per barrel.

The board are pleased to state that arrangements have recently been made to lease a portion of the company's extensive storage at a satisfactory rental.

The board have in contemplation a re-adjustment, at an early date, of the existing debenture issue, which only stands at £15,000. This is altogether disproportionate to the present assets, and the funds provided by an increased issue can be advantageously utilised for further developing the Moore territory, where additional plant has already been provided.

The profit and loss account shews a balance of £2,899 7s. 10d., and the directors recommend that a dividend of 7½ per cent. be paid as heretofore on the preference shares, the whole of which are now issued.

Mr. E. L. Bentley and Mr. R. D. Noble are the directors retiring by rotation, and being eligible, offer themselves for re-election.

OILS USED FOR GAS-MAKING PURPOSES.

THEIR RELATIVE VALUE.

The relative value and the composition of various oils used for gas-making purposes is dealt with at length by Messrs. R. Ross and J. P. Leather in a recent issue of the *Journal of the Society of Chemical Industry*. Some few years ago the authors made a communication to the same journal in which they shewed the possibility of judging the value of an oil for gas-making purposes by the results of certain chemical and physical tests.

Since that time, however, they have made experimental determinations of the values of different classes of hydrocarbons, and have examined a large number of typical gas oils by methods substantially the same as those used before. Their results led them to the following conclusions:—(1) Open-chain compounds have the greatest value for gas-making purposes. (2) Double bonds in the chain reduce the value somewhat. (3) A considerable reduction in the value is caused by the presence of one or more rings. (4) Ring compounds are more valuable in proportion as they are more fully hydrogenised. (5) Benzene rings are practically valueless for "cracking" purposes.

As regards the relationship between specific gravity and refractive index, it was found that the specific refraction open chain compounds whether paraffin or olefine, was about 0.555 to 0.560. The specific refraction was reduced by the presence of a hexamethylene ring, and still more so by a saturated double ring, whilst, on the other hand, this value was increased to a considerable extent by the presence of an unsaturated ring, as in the case of tetrahydronaphthalene.

In illustrating the application of these conclusions, the authors only compare the fractions boiling between 280° and 300° C., these being present in all the oils examined. In the case of Pennsylvanian oils the specific refraction of this fraction (0.556) was lower than in oils of other origin, and pointed to the presence of a large amount of paraffin and olefines. But the specific gravity of the oil (0.833) and that of the substance frozen out from ether-alcohol solution (0.849) indicated a mixture of paraffins, olefines, and "paraffinoid" bodies, *i.e.*, compounds with one or more long open chains, together with a hexamethylene ring, and this conclusion was confirmed by the high valuation figure of these oils (14,967 to 15,944). In like manner the same fraction from Russian oils was judged to consist, in the main, of paraffinoid compounds. Texas oil, in which the fraction had a specific gravity of 0.835 and a specific refraction of 0.549, apparently contained a considerable amount of fully hydrogenised complexing compounds not of a paraffinoid character—a conclusion confirmed by the valuation figure. In the case of Roumanian oils the average specific gravity (0.882) and specific refraction (0.557) of the fraction pointed to the presence of a considerable proportion of unsaturated ring compounds. Certain Roumanian oils, however, came between Russian and Pennsylvanian oils in their characteristics. Borneo oil was remarkable for containing a larger proportion of unsaturated and par-

tially hydrogenised ring compounds than any of the other oils. This was shewn by the high specific gravity (0.936) and low specific refraction (0.560) of the fraction, which were in accordance with the remarkably low valuation figure of the oil (7,425 to 8,067). Kansas oil, the fraction from which had a specific gravity of 0.850 and specific refraction of 0.555, was judged to be inferior to Pennsylvanian oil for gas-making purposes. Californian oil apparently contained a considerable amount of paraffins and paraffinoid compounds, together with some incompletely saturated compounds. The sample of Galician oil examined was concluded to contain a somewhat greater quantity of open chain compounds than the Russian oils did. Grosny oils resembled Russian oils, but were of less value for gas-making, probably owing to their containing less true paraffins and more paraffinoid substances. Scotch gas oils yielded fractions of low specific gravity and high specific refraction (0.560), but the valuation figures were poorer than was anticipated from these constants. As these oils were the products of destructive distillation, the authors inferred that they probably consisted of a considerable amount of olefines, together with substances containing benzene rings, the latter, judging by the low specific gravity, being probably of a paraffinoid character.

COMPARATIVE EFFICIENCIES OF PUMPING PLANTS.

In a recent issue of the *Zeitschrift des Vereines Deutscher Ingenieure*, A. Carlsund, of St. Petersburg, draws attention to some interesting figures on the efficiencies of various pumps. According to papers recently published by H. Neumann and by La Baume, a good steam-pump should, on average, perform work equivalent to $A = 200,000$ metre-kilogrammes per kilogramme of coal. The Dortmund Water Works have made the noteworthy performance of $B = 283,200$ metre-kilogrammes per kilogramme of coal, this figure representing the yearly average. During the trials of the machinery of the new water works at Beelitzhof, near Wannsee, which are driven by pumps of the Aschersleben Maschinenbau A.G., the figure $C = 349,425$ metre-kilogrammes was reached. The trials of a plant in Bergheim, where producer-gas motors are employed, gave $D = 387,000$ per kilogramme of lignite briquettes, and the average figure of the first six months of 1906 is $E = 314,000$ kilogrammes. At St. Petersburg the engineering works of L. Nobel put down in 1905 a pumping plant of three Diesel engines driving double-acting plunger pumps. The 72 hours' trial shewed that one kilogramme of naphtha fed in the three sets, 1,168,000, 1,208,500, and 1,109,100 metre-kilogrammes; renewed trials at the end of the first year gave the higher figures of 1,256,700, 1,248,400, and 1,205,500 metre-kilogrammes per kilogramme of naphtha; the mean would be $F = 1,236,833$. As the losses incurred in starting and stopping Diesel engines are small, these figures may be accepted approximately as working averages. From these data A. Carlsund deduces the following values for the work done per large calorie:— $A = 28.6$, $B = 40.5$, $C = 49.9$, $D = 80.6$, $E = 65.4$, $F = 123.7$ metre-kilogrammes; and the total efficiencies of the pumping-engines would be $A = 6.7$ per cent., $B = 9.5$, $C = 11.6$ (these three cases concerning steam engines); $D = 18.5$, $E = 15.3$ (producer-gas motors); $F = 28.9$ per cent. (Diesel engines). It will thus be seen that according to the authority's conclusions the Diesel is by far the most efficient.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	5 ³ / ₈
Baku Russian Petroleum ..	£750,000 Ord.	£1	3/0-3/6
.. .. .	£650,000 5 ¹ / ₂ % Pref.	£1	6/3-6/9
Bibi-Eybat Petroleum Co. ..	£250,000 Ord.	£1	7/0-8/0
Californian Oilfields ..	£550,000 Pref.	£1	5 ¹ / ₂ -5 ³ / ₈
European Petroleum ..	£550,000 Ord.	£1	1/6-2/6
.. .. .	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6 ¹ / ₂ % Pref.	£1	82-85
.. .. .	£600,000 Ord.	£1	11/6-12/6
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	11/6-12/6
.. .. .	£575,000 Ord.	£1	2 ⁵ / ₈ -2 ⁷ / ₈
Shell Transport & Trading ..	£2,000,000	£1	7/0-8/0
.. .. .	£1,000,000 Pref.	£10	29/6-30/6
Spies Petroleum Company ..	£312,500	10s.	9 ¹ / ₂ -9 ³ / ₄
			8/0

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on October 22nd.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	462	465
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,050	4,100
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-	250	139	141
cheff & Co.	250	—	—
Neft Co.	250	—	—
Nobel Bros.	5,000	8,400	8,500
.. .. .	250	—	—
Rops and Co., V... .. .	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading	250	—	—
Co.	250	—	—
" " " (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8 ¹ / ₂ pd	£199,750	£10	21 ³ / ₈
Do. 6% Cum. Pref. ..	£100,000	£10	12 ³ / ₄
Burmah Oil, Ord.	£1,100,000	£1	58s. 3d.
Do. Pref.	£250,000	£1	25s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8 ¹ / ₄
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	44s. od.
Do. New (£8 10s. pd.)	£131,750	£10	43s. 6d.
Pumpherson Min. Oil Co., Ltd., Ord.	£110,500	17s.	6 ¹ / ₈
.. .. . (17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	12 ³ / ₄
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	35s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	74s. 3d.
Do. "B" Deb...	£150,000	£100	162 ³ / ₈

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	65	65	1,000
Aurora " (Deb. 5%) ..	94	94	—
Campina Poiana Mij.	18 ¹ / ₂	18 ¹ / ₂	—
Dordtsche Petroleum Mij. (Pref.) ..	128 ¹ / ₂	128 ¹ / ₂	500
.. .. . (Deb. 4 ¹ / ₂ %)	102	102	1,000
Elzasser Petroleum Mij.	2	2	1,000
Gaboes "	—	19 ³ / ₄	—
Holl. Rumeensche Petroleum Mij. ...	35	36	1,000
Int. Rum. Pet. Mij.	109	109 ¹ / ₈	500
Java Petroleum Mij. (Ord.) ..	—	—	1,000
.. .. . (Pref.)	—	38	—
Koninklyke Nederl. Pet. Mij. Shares	726 ¹ / ₂	742 ³ / ₄	250-1,000
.. .. . Share certificates	720	743 ³ / ₄	1,000
Mœara Enim Petroleum Mij. ..	136 ¹ / ₂	142	100
.. .. . 1-1,000 Oblig. 5	101 ¹ / ₈	101 ¹ / ₈	250-1,000
" Moesi Ilir " Petroleum Mij. ..	42	42	—
Nederl.-Rumeensche Petroleum Mij.	—	17 ¹ / ₄	—
Nieuwe Ned. Petroleum Mij. And...	—	55 ¹ / ₄	1,000
Oliebronnen in Hannover Mij. ..	135	135	—
.. .. . (Deb. 5%) ..	98	98	—
Panolan Maatschappij Cert. ..	355	355	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	147 ¹ / ₂	140 ³ / ₈	1,000
.. .. . (Common) ..	125 ¹ / ₂	118 ¹ / ₂	—
Sumatra-Palembang Petroleum Mij	77 ¹ / ₈	79 ⁵ / ₈	50
Zuid Perlak Petrol. Mij. (Pref.) ..	102 ¹ / ₂	107	—

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A Practical Handbook on the Exploration, Exploitation, and Management of Russian Oil Properties. By A. BEEBY THOMPSON, A.M.I.M.E., late Chief Engineer and Manager of the European Petroleum Co.'s Russian Oil Properties. About 500 pp., with numerous Illustrations and Plates.

London: Crosby Lockwood & Son, 7, Stationers' Hall Ct., Ludgate Hill.

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SATURDAY, OCTOBER 27TH, 1906.

**THE CROWNING EFFORT IN THE FAR
EAST.**

THE important amalgamation which is shortly to be affected between the Royal Dutch Petroleum Co. and the "Shell" Transport and Trading Co., Ltd., marks the culmination of a series of movements in regard to the petroleum industry in the Far East, which have already done much in the cause of progress and development. Thus the present is rendered a most opportune moment for reviewing the developments made in the Far Eastern fields, and also hazarding an opinion as to the future success of the petroleum industry in that part of the world.

It is now about four years ago, when speaking about the question of amalgamation of operating concerns with the Royal Dutch Petroleum Co. in the Far East that we said, "The best way to ensure success of the

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companies operating there is to eliminate unnecessary competition, and the best way to do that is to equalise all interests, to strengthen the weaker concerns and consolidate the respective properties."

As events have since proved, the policy propounded above has been the principle underlying the developments in the Far East during recent years, and the final and important amalgamation to which Sir Marcus Samuel referred at this week's meeting of the "Shell" Co. is but one of the moves attendant upon the carrying out of such a policy. But to thoroughly understand the full significance of this projected combination of the producing, refining and distributing interests in the Far East, one must go back almost to the time when the Far East was first looked to as offering great possibilities in the way of petroleum production.

It was about sixteen years ago that the Far Eastern petroleum industry commenced to loom as a factor in the supply of oil in that quarter of the globe. The whole production in 1890 amounted to only 1,600 tons, of which quantity 1,000 tons found its way on the Far Eastern markets in the shape of refined products. The production was then obtained wholly from Java by the Dortsche Petroleum Co., to whose energies the commencement of the petroleum history of the Far East is traceable. Two years later, the Royal Dutch Co. made its appearance in Sumatra, and this concern which now plays so important a part in the petroleum trade of the Far East, had a production during its first operating year in Sumatra of 13,500 tons. The Dortsche and the Royal Dutch Companies had practically the monopoly of the development of the petroleum industry in Sumatra and Java for a number of years, the production rising steadily throughout this long period, increasing from 26,400 tons in 1892 to 133,500 tons in 1895 and 363,800 tons in 1897.

It was about this time that three new companies came into the fields—the Sumatra-Palembang and the Moera Enim Companies in Sumatra, and the "Shell" Co. in Borneo, and from that time forward the developments throughout the Far East in regard to petroleum production grew by leaps and bounds, the crude oil production of the three-mentioned companies in 1900 being 51,600 tons, 135,400 tons and 64,500 tons respectively, this, together with the output of the Dortsche and Royal Dutch Companies, as well as a few minor concerns, bringing the production of the Far East that year to considerably over 400,000 tons of oil.

But the production of the Royal Dutch Co. began to wane, and though other and younger concerns made rapid headway, this company seemed to be on a path leading to everything but success. Just at the time when the Sumatra-Palembang Co. commenced operations, the Royal Dutch could boast of an annual production of 338,000 tons, but in 1900 this figure had dropped to 87,000 tons. The fact was that about this time the Royal Dutch Co. was in a very critical position, and it was only owing to the re-organisation of the concern, and the extraordinary ability displayed by the new management that the tide turned, and the Royal Dutch became a great power throughout the Far East.

The original aims of the various Dutch concerns were to supply the demand that existed in the Far East for kerosene with its Dutch-Indian population of over 40,000,000 persons—certainly a wide field for enterprise in itself—yet none ever imagined that a time would come when they would be able to participate in a growing export business, in which the trade in benzine would play so prominent a part.

As time went on and the bulk and case oil export trade continued to assume more importance each year, the Royal Dutch Co. took advantage of all opportunities as they presented themselves of strengthening its position in the Far East, and one by one the smaller concerns were gradually absorbed—the Moera Enim, the Moesi Ilir, and the Sumatra-Palembang, while last of all we have the amalgamation with the "Shell" Transport and Trading Co., which places the amalgamated interest in absolute control of the Far Eastern markets.

No complete data is furnished as to the extent of the petroliferous areas in the Far East, but we have sufficient evidence before us to shew that there is something like 3,000,000 acres of concessions which are being worked by the various producing companies there. Thus with such an enormous area of land, with up-to-date and extensive refineries in Borneo, Sumatra, and Java, which are capable of treating at least 3,000,000 tons of crude per annum, in addition to an expensive distributing organisation and a well-equipped fleet, it naturally goes without saying that the development of the wonderfully prolific petroliferous fields in the Far East will in the future exercise an influence over the world's petroleum industry which will indeed be very great, and also that the record of production last year (1,200,000 tons) will be soon left far behind.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended 13th October was 267,000 poods, or 4,304 tons; and week ended 20th October 262,000 poods or 4,224 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended October 14th was 263,000 poods, or 4,240 tons; and week ended 21st October, 270,000 tons, or 4,353 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 14th October was 137,800 poods, or 2,219 tons; and for the week ended 21st October, 132,500 poods, or 2,138 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 14th October was 124,391 poods, or 2,005 tons; and for the week ended 21st October was 117,775 poods, or 1,899 tons.

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 25th October, 1906, as follows:—

Raw materials are very strong, and prices of tin plates continue firm at last week's rates as under, according to time of delivery:—

1c	18 $\frac{3}{4}$ × 14	124 sheets	110 lbs.	14/3 to 14/6	per box.
1c	19 $\frac{1}{4}$ × 14	120 "	110 "	14/3 to 14/6	"
1c	20 × 10	225 "	156 "	20/- to 20/3	"

F.o.b. Wales. Tin lining and iron hooping extra.

The Use of Compressed Air at the Baku Oil Fields.

(From Our Own Correspondent.)

It must be within the province of all oil-field managers to give an answer on the merits or demerits of the use of compressed air for the purpose of obtaining oil, for oil property management is not a set of dogmas. It is the outcome of patient experience and facts, besides in the great rush to obtain more oil than one's neighbour, no effort has ever been spared by those interested to give everything a trial which has made claims to produce oil.

Although baling is the established method of producing oil in the Baku fields, it is not because compressed air and its utility have not been thoroughly investigated. The support which is given to the preference of baling derives its present strength from the unquestionable advantage which baling gives in regulating and stimulating the output of the oil sources—all things considered. Such advantages cannot be obtained from compressed air because it is, so to speak, too mechanical in its action, and consequently it is only used in special cases.

The general adoption here of the system of baling, and the high authority by which it is endorsed, can leave no doubt as to its being the superior factor in producing Baku oil. There is another broad, general fact which, in considering this subject, one must not lose sight of, namely, the question of cost and maintenance. It is claimed, and justly too, that compressors are cheaper in the long run—that is, of course, when working a well under favourable circumstances—yet, despite this advantage, which is certainly a very important one, compressors cannot, and never will, take the place of balers in the Baku fields.

For the sake of clearness, let me observe before proceeding further that although baling holds such a firm position, compressors are nevertheless an indispensable adjunct to the oil property, and are in constant requisition to do work where balers dare not and cannot be used.

It will be remembered that in my former letter, I stated that the use of compressed air for the purpose of obtaining oil in the Bebe-Aibat and Balakhany oil fields is not nearly so practical as baling, and that air compressors are only used by property managers when a well has a small diameter, or is crooked, or where baling is risky. In order to ascertain the opinions of the various property managers regarding the merits or demerits of compressed air I made a personal visit to the plots upon which compressed air is used, both at Bebe-Aibat and Balakhany, and went fully into the matter, discussing each particular well with the managers.

What I had on hand was in reality to discover whether, as a matter of fact, the use of compressed air has a pernicious effect upon a well, as it has been set forth that air compressors while being more economical in working, have the unfortunate drawback of temporarily inflating the production of a well, which action it is claimed exhausts the oil, and thereby turns the well to water, or, in other words, spoils it.

Formerly it was believed by many that compressed air could transform a water well into an oil one, and now it is alleged that compressed air converts an oil well into a water one. That neither of these attributes are in accordance with facts we shall presently see from the results of my investigations which are as follows:—

Out of 32 plot managers whom I visited, and among whom figure those of the most successful operating companies, to wit, Messrs. Nobels, Rothschilds, Mantascheff, etc., not one admitted that compressed air can spoil a well, but all agreed that the unsatisfactory results obtained from the use of compressed air are entirely due to the lack of adequate knowledge of the circumstances of the well and to the indiscriminate use of compressed air.

The question of the circumstances of a well now naturally arises, and the investigations further shew—

(a) That in the majority of cases, compressed air is

utilised where it is impossible or risky to bale. An analysis discloses the fact that 70 per cent. of the wells make small diameters, and are too deep to bale.

(b) That in several cases, compressed air is used in wells, of which the level of liquid is not less than half of the entire depth, and be it remarked the level in all of these instances is always stationary, and besides the wells give no cork. It is only in such cases that experienced and careful plot managers advise the use of compressed air;

(c) That air lifts had been placed in two wells which contain nothing but water, in order to endeavour to redeem the oil source, which I learned had been damaged through faulty cementation.

The production of all the wells under consideration was in every case highly satisfactory. Additional compressors are at present being fitted up on the properties of Messrs. Nobel (Balakhany and also Bebe-Aibat), Ter Akopoff, Bacht and others. Some of these compressors have been purchased from the Russian Petroleum and Liquid Fuel Co., Ltd., which, as already pointed out, is considerably overstocked, and is offering the remainder of their compressors for sale. These foregoing data are sufficient within themselves to conclusively dispel the fallacy that the use of compressed air is pernicious to a well.

Let me explain what I know to be the cause of the unsatisfactory results obtained from the use of compressed air on Oleum's property during 1905. To do so I must take into account that the wells in which air lifts are alleged to have proved useless were Nos. 27, 35, 57, 62 and 46, and that all of these wells, except the latter were cemented. No. 35 was cemented twice, while No. 27 holds the record of having been treated with over a 1,000 barrels of cement. This is the first time (and I can guarantee the last) in the history of oil practice in Baku, that such an enormous quantity of cement has been used in a well. In cementing this well, the water and oil from the upper sources were shut off as also was the then existing oil source, but left untouched the water coming from the lower sources of three of the adjoining wells. No. 35 is an analogy to No. 27, and carried with it the shutting off of oil in other three of the neighbouring wells. Air lifts were placed in these and other wells, after cementation, to pump out the water in the expectation of redeeming the oil source, but without results.

The case of well No. 46 stands apart. This well was one of the most successful results of the use of compressed air. There was always a good stationary level of liquid, a large oil source, and an absence of cork. During the time it was worked with compressed air, the well gave an average of 15,000 poods per day, until the adjoining wells Nos. 11 and 69 were cemented, when it immediately turned to water and liquid cement. To blame compressed air for not being able to obtain oil from sources which had been shut off with cement must be, to say the least of it, either a human weakness or managerial diplomacy. Why, the baler would have proved just as useless under such circumstances. The recent withdrawal of air lifts from several of Oleum's wells has resulted in an increase by baling, and has given well No. 38 an opportunity of clearing itself by cork by spouting periodically. There is absolutely nothing in this which can be laid at the door of compressed air; the fault, for such it was, must be attributed to the lack of adequate knowledge of the circumstances of these wells, and to the indiscriminate use of compressed air by the new management. Some wells which are being worked by air lifts, and give excellent results, often turn to emulsion. Practice has shewn that fully 90 per cent. of such wells have been brought back to their normal condition by removing the air lifts and resorting to baling for a period, but this is an operation that requires the undivided attention and tact of the plot manager.

THE "SHELL" TRANSPORT AND TRADING COMPANY, LIMITED.

Dr.	Profit and Loss Account for the Year ending 31st December, 1905.				Cr.		
	£	s.	d.		£	s.	d.
To Management (covering Office Rent, Salaries and Expenses), Directors' and Auditors' Fees ..	23,256	0	0	By Balance from Year 1904 (£207,815 17s. od., less Dividend paid 1st January, 1905, £100,000) ..	107,815	17	0
„ Income Tax estimated for the year 1905 ..	4,000	0	0	„ Net Profits for the Year 1905, including Chartered and other Freights, Rents of Installations, Interest and Dividends receivable from the Nederlandsch-Indische Co., the P.P.A.G., and the Asiatic Petroleum Co. ..	418,146	11	0
„ Provision for Depreciation of Steamers, with £20,000 in respect of Installations, etc., and £1,280 10s. 7d. of Special Extensions ..	103,356	12	5				
„ Amount written off Cost and Expenses of the Issue of Preference Shares ..	10,000	0	0				
„ American Expenses, amount as per Balance Sheet, 31st December, 1904, now written off..	4,000	0	0				
„ Cost of Working European Oil Business, including provision for results of the trading to 30th April, 1906 ..	113,384	10	8				
„ Balance carried to Balance Sheet ..	267,965	4	11				
	£525,962	8	0		£525,962	8	0

Dr.	BALANCE SHEET at 31st December, 1905.				Cr.				
LIABILITIES.				ASSETS.					
	£	s.	d.	£	s.	d.	£	s.	d.
To Capital Authorised and Paid up:—									
100,000 Preference Shares of £10 each	1,000,000	0	0						
2,000,000 Ordinary Shares of £1 each	2,000,000	0	0						
				3,000,000	0	0			
„ Creditors—									
Bills payable	36,081	5	11						
Petroleum Producte Actien Gesellschaft — Balance of Accounts	127,954	16	1						
On Current Accounts	110,970	3	4						
Unmatured Liabilities and Charges upon Steamers and Installations, etc.	478,159	13	11						
				753,165	19	3			
„ Dividend accrued to date on Preference Shares (payable 2nd April, 1906)				12,500	0	0			
„ Insurance Account				5,167	14	1			
„ Reserve Fund—									
Amount as shewn in Balance Sheet at 31st December, 1904				400,000	0	0			
„ Profit and Loss Account—									
Balance per Statement above	267,965	4	11						
Deduct Preference Share Dividend for one year to 31st December, 1905 ..	50,000	0	0						
				217,965	4	11			
APPROPRIATION.									
Dividend on Ordinary Shares paid 1st January, 1906 ..	100,000	0	0						
To write off Balance of Cost and Expenses of the Issue of Preference Shares ..	19,109	18	1						
To write down Cost of Shares in the Petroleum Producte Actien Gesellschaft ..	13,500	0	0						
To be carried forward ..	85,355	6	10						
	£217,965	4	11						
				£4,388,798	18	3			

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO OCTOBER 22nd, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Oct. 8.	From Jan. 1.	Since Oct. 8.	From Jan. 1.	Since Oct. 8.	From Jan. 1.	Since Oct. 8.	From Jan. 1.	Since Oct. 8.	From Jan. 1.	Since Oct. 8.	From Jan. 1.	Since Oct. 8.	From Jan. 1.	Since Oct. 8.	From Jan. 1.
Austria ..	—	2,118,640	—	370,890	6,000	83,930	—	—	—	—	—	—	—	—	6,000	2,584,460
Belgium ..	—	370	20,810	414,218	—	11,000	—	—	—	5,300	—	—	382	5,367	21,192	425,255
Canada ..	—	—	22,000	47,460	—	56,400	—	—	—	—	—	—	200	—	22,000	104,060
Dutch India ..	—	480	—	960	—	192	—	—	657,000	11,689,130	—	1,010	—	1,920	657,000	11,693,692
Germany ..	5,490	5,106,280	65,690	1,181,153	—	—	—	—	—	2,380	—	—	400	16,562	71,580	6,307,455
Holland ..	—	10,120	—	2,920	—	9,440	—	—	—	1,412,673	—	271,000	5,800	69,640	5,800	1,713,573
Roumania ..	1,015,990	5,465,745	—	—	—	—	2,087,880	2,603,640	3,628,220	—	—	—	—	—	3,619,630	11,181,845
Russia ..	1,410,120	28,140,820	347,000	4,306,731	—	—	9,650	3,731,473	—	6,210	—	—	—	5,660	1,760,770	36,190,894
U.S.A. ..	5,371,240	76,512,485	1,981,540	33,000,721	—	669,168	1,772,190	36,198,508	—	6,844,200	—	9,072,430	468,670	1,733,764	9,593,640	164,021,186
Other Countries	285	1,655	1,180	31,992	—	—	—	—	—	4,130	—	—	—	214,410	1,465	252,187
	7,803,125	117,356,655	2,438,220	39,357,045	6,000	830,130	1,781,840	42,017,861	3,260,640	13,592,243	—	9,344,440	475,252	2,047,523	15,765,077	234,544,607

MISCELLANEA.

A NEW COMPETITOR FOR THE ENGLISH MARKETS.

With the completion of the pipe line across the Isthmus of Panama, the plans of the Union Oil Co. to secure a wider market for Californian oil on this side the Atlantic have been pushed considerably nearer realisation, and though at the present time it is somewhat premature to refer to the company's movements upon the English market, it is an open secret that not only are they to introduce to the English manufacturers the advantages attendant upon the use of liquid fuel, but it is intended to place a new refined oil on the market. For the carrying out of this latter scheme it is said that the company will erect a refinery at some point upon the Atlantic coast of America, to which Californian crude can be shipped in bulk in the company's own oil tankers and also through the Panama pipe line, and afterwards distributed in the European and other markets as kerosene or other products.

Mr. W. Stewart, the company's manager of the London office returned a few days ago from America, where he had been busily engaged perfecting plans, the preliminaries of which are as yet unknown to the outside world.

BAKU PRODUCTION IN SEPTEMBER.

The production of crude oil at the Baku oil fields during September amounted to 39,304,000 poods. The production of the leading firms during the month was as under :—

	Poods.
Nobel Bros.	4,300,000
Caspian and Black Sea Society	2,300,000
Baku Naphtha Co.	2,200,000
Caspian Society	2,200,000
Moscow-Caucasian Co.	1,800,000
Mantacheff and Co.	1,800,000
Mirzoeff Bros.	1,300,000
Pitoeff and Co.	1,200,000
Zoubaloff	1,200,000
Schibaieff and Co.	1,100,000
Baku Russian Petroleum Co., Ltd. —	1,100,000
Assadulaeff	1,100,000
Russian Naphtha Co.	1,000,000
Aramazd Co.	1,000,000
Russian Petroleum and Liq. Fuel Co., Ltd.	900,000
Naftalan Co.	800,000
Balakhany Co.	800,000
Nagieff	700,000
Shikhovo Co.	600,000
Ter Akopoff Co.	600,000
Tumaeff and Co.	500,000
European Petroleum Co., Ltd.	500,000

THE PETROLEUM POSITION IN ROUMANIA.

The general progress realised in the Roumanian petroleum industry is having a direct influence on the prices of crude oil. The various commercial organisations lately established abroad, or in course of formation, will enable the Roumanian petroleum exports to develop under most favourable conditions. The production of crude, although large and growing, is insufficient to

meet the demand, and prices consequently remain high, namely, 36 to 38 francs per ton, while there is the probability that they will further advance. People display great reserve in forward sales of crude oil, in view of the prospect of higher prices in the near future.

There is a great and growing demand for benzine for export to Germany and France. The export of all petroleum oils is proceeding satisfactorily and at good prices.

PETROL AND THE MOTOR INDUSTRY.

Motorists throughout the country have viewed the recent slight increases in the price of petrol with unnecessarily great alarm, and, as a consequence, many are directing their attention to finding a new fuel if possible. The Motor Union of Great Britain and Ireland is taking a prominent part in this respect, it having appointed a special committee to consider and report upon the subject of fuel for motor cars. In a circular which the Union has recently issued it is stated that the petrol of a gravity of .715 to .720 which is now generally in use is an expensive necessity, and seeing that it may possibly become even more expensive, the Union has resolved to thoroughly investigate the subject of fuel and see what can be done in the direction of securing fuel of a more economical nature.

A ONE MAN OIL COMPANY.

ANOTHER MYSTERIOUS CASE FROM TEXAS.

One of the Texas courts is now occupied in the hearing of an interesting oil action, this being the case of T. J. Anderson v. United Oil Fields Co., the application being for the appointment of a receiver.

The plaintiff alleges that in 1904 the defendant Hammond organised the United Oil Fields Co. with a capitalisation of \$1,000,000, divided into 1,000,000 shares of the par value of \$1 each; that plaintiff purchased stock from the said Hammond to the amount of \$272,850, and that Hammond claimed to be president of the defendant company. Plaintiff contends that the company had no legal assistance or permit to do business in Texas; that there was never a meeting of the stockholders or directors, or an election of officers for the defendant company, and that the same Hammond usurped the executive power of the said company, and in his own person performed all the duties and executed all the functions of president, secretary and treasurer. Plaintiff further charges that with the money paid him, Hammond purchased a tract of land on Spindle Top containing producing oil wells, which were operated under a contract made by him with Benjamin Andrews, and that Hammond received and appropriated to his own use and benefit \$50,000 for the share of oil, and has made no accounting whatsoever for the same. The plaintiff now claimed that he is entitled to the said property and alleges that Hammond is totally insolvent.

ROUMANIAN PETROLEUM PRODUCTION.

JULY AND AUGUST DETAILS.

According to official statistics published in the latest issue of the *Moniteur du Petrole Roumain*, the production of crude oil in Roumania in August, compared with that of July, was as under:—

	July. Tons.	August. Tons.
Prahova District—		
Bustenari	46,206	43,420
Campina-Poiana	9,758	7,041
Moreni	10,973	11,233
Baicoi-Tinta.. ..	4,509	3,949
Other Fields	637	905
Total for Prahova	72,083	66,548
Dambovitza District	1,595	1,288
Buzeu	1,153	—
Bacau	742	826
Total	75,573	68,662

The figures for August are not complete, some of the firms not having made their returns. The real figures will be found to be about equal to the July production.

The production of the principal firms in July and August was as under, the latter figures, however, being incomplete:—

	July. Tons.	August. Tons.
Steaua Romana	26,319	20,927
Bustenari Co.	10,876	10,742
Campina-Moreni Co... ..	6,934	6,719
Romano-American Co.	3,569	76
Moreni Co.	4,260	4,520
Telega Oil Co.	3,764	4,264
International Co.	3,837	3,791
Trajan Co.	1,771	1,950
Aquila Franco-Romana Co.. ..	1,272	1,306
Colombia Co.	1,112	3,496
Arnheemsche Petroleum Co.. ..	1,050	896

PROGRESS IN THE SANTA BARBARA FIELD IN CALIFORNIA.

An interesting synopsis of the developments in regard to the various minerals of Santa Barbara county is found in the report of the State Mineralogist. From this it appears that at the present time there are 41 oil companies operating in Santa Barbara county. Nine of these are operating near Lompoc; three near Santa Maria; ten near Orcutt; one near Carpenteria; fifteen

near Summerland, and three near Los Alamos. The elevation of the wells ranges from sea level to 1,100 feet above; and the depth of the wells runs from 300 feet to 4,300 feet. The reports on tankage and reservoir capacity are not complete, but so far as given shew a total capacity of 2,200,000 barrels of which the Union Oil Co. of California is credited with 2,000,000.

Another item gathered from the report is that there are 311 oil wells in the county. The Union Oil Co. has the greatest number, 25 in the Santa Maria field and 11 in the Lompoc field. The Western Union Oil Co. has 22 wells, the Sea Cliff Oil Co. and the Sea Side Oil Co. 20 each at Summerland; G. F. Becker has 24, and J. F. Miller, 27, at Summerland; the Kern Trading and Oil Co. is credited with 19 wells at Summerland, and the Duquesne, 18; the Potomac Oil Co., 13; J. E. Lillis, 12; Sunset Oil Co., 13, and Southern Pacific Oil Co., 9—all at Summerland. The Brookshire Oil Co. at Santa Maria, four; the Effsons at Lompoc, three; the Graciosa Oil Co., five; the Pinal Oil Co., at Santa Maria, eleven, and a number of other companies from one to four wells each.

AMERICA'S EXPORTS OF PARAFFIN WAX.

The exports of paraffin wax from America during August amounted to 10,840,279 pounds, as compared with 10,841,637 pounds during August of last year. The figures for the two periods were as under, in pounds:—

Exported to—	1906.	1905.
United Kingdom	7,217,387	6,979,263
Belgium	58,176	30,450
France	3,828	94,377
Germany	621,592	612,982
Italy.. ..	266,552	1,150,351
Netherlands	617,537	551,351
Other European Countries	294,475	292,753
Central America and British Honduras	65,095	17,800
Mexico	1,081,115	348,780
Other South American Countries	23,084	66,383
Japan	—	151,806
British Australasia	264,147	199,250
Other Asia and Oceanica	24,084	165,137
British Africa	153,727	166,172
Other African Countries	140,050	—
Other Countries	9,430	14,782
Totals	10,840,279	10,841,637

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The Petroleums of North America.

By Mr. CLIFFORD RICHARDSON.

Being a Comprehensive Account of the Constituents of American Petroleum.

In a recent issue of our excellent contemporary, the *Oil, Paint and Drug Reporter*, Mr. Clifford Richardson publishes a most complete account of the component parts of the various American petroleums; from the light oils of the Appalachian fields to the heavy liquids of Texas, the Mid-Continent fields, and California. He says:—

Among the native bitumens those are to be classified as petroleums which are liquid at ordinary temperatures. Such a classification includes the more rarely occurring naphthas and the heavier malthas, the latter dense liquids flowing only very slowly at ordinary temperatures and gradually grading into the solid bitumens.

Petroleum is very widely distributed over the continent of North America and the adjacent islands. It is found in Alaska, in the provinces of British Columbia, Alberta, Athabasca, Assiniboia, Ontario, Quebec, New Brunswick, Nova Scotia and Cape Breton of the Dominion of Canada, and in especially large amounts in Lambton and Essex counties in Ontario. It is well distributed throughout the United States from the Atlantic to the Pacific coasts, forming numerous fields known as the Appalachian, owing to the fact that it follows the trend of the Appalachian Mountains, and including the States of New York, Pennsylvania, West Virginia, South-eastern Ohio, and parts of Kentucky and Tennessee; the Ohio-Indiana, the Kansas, including portions of the Indian and Oklahoma territories, the Texas and Louisiana, the Colorado, the Wyoming, and, on the Pacific coast, the California fields of the Central Valley and of the immediate coast in Santa Barbara, Ventura, Los Angeles and Orange counties. Petroleum, although undeveloped as a commercial product, is known in Mexico along the coast of the Gulf of Mexico, and it occurs in several localities in the Island of Cuba.

Developments of Petroleum as an Industrial Product in North America.

Although petroleum has been collected in small amounts for many years previously, its production on an industrial scale may be said to date from the completion of the first well, which was sunk for the purpose of obtaining oil, at Titusville, Pa., in 1859. In 1861 the petroleum obtained from this field exceeded 2,000,000 barrels of 42 gallons, the output gradually increasing in Pennsylvania and New York until, in 1882, it was more than 30,000,000 barrels. From that time on the production has varied in these States, reaching 33,000,000 barrels in 1891, and then decreasing, until 1904, when a little over 12,000,000 barrels was the output.

The total output of the Pennsylvania and New York fields has, therefore, decreased markedly in the last ten years, but that of West Virginia and South-eastern Ohio, which may be regarded as part of the same field, since the source and character of the oil is much the same, has increased to such an extent from 492,578 barrels in 1890 to 12,644,686 barrels in 1904, as to make the product of the entire Appalachian field at the present time nearly as large as it was some years ago, the total production in 1904 being 31,408,567 as compared to 36,295,433 barrels, the largest output produced in 1900, its value being greater than that of any other field.

As early as 1862 crude petroleum was produced to a small extent in the Province of Ontario, Canada, the output increasing in subsequent years until it exceeded 1,000,000 barrels in 1894. From that date it has fallen off until ten years later, 1904, it was something less than half-a-million barrels.

In 1885 the petroleum of the Ohio-Indiana field became a factor in the North American supply, reaching over 6,000 barrels in that year, and increasing to 24,689,184 barrels in the two States in 1904, making this field the third in its output and second in value of its product. Within recent years the production of the

State of Indiana has increased largely, whilst that of Ohio has fallen off considerably.

The existence of oil in Colifornia was known as far back as the seventh decade of the last century, attention having been drawn to it by the State geologist in 1865. It did not become of industrial importance until many years later, the output not exceeding 100,000 barrels until 1882, and 1,000,000 only in 1895. In 1904 it had reached the astonishing figure of 29,649,434 barrels, and the State ranked as first in the amount of petroleum which it produced and second as a field, although not first in the value of its product owing to its inferior character.

Colorado first figures as a producing State in any amount in 1887, with less than 100,000 barrels. Since that time the output has reached over 800,000 barrels in 1892, and has fallen off in 1904 to 501,763 barrels.

The petroleum industry of Kansas and the adjacent territories is the development of the last few years. In 1900 less than 75,000 barrels were produced, while in 1904 more than 5,500,000 barrels were obtained in that State and the adjacent territories.

Texas, the second largest producing State in 1904, and the fourth as a field, turned out over 500,000 barrels in 1901, and in 1904 reached 22,241,413 barrels.

The output in barrels of the various fields which have been mentioned and the percentage of the total product in the years 1899 and 1904 are given in the following table:—

PRODUCTION OF PETROLEUM IN THE UNITED STATES, 1899 AND 1904, BY FIELDS.

(Barrels of 42 Gallons.)

			1899.	
			Barrels.	Per Cent.
Appalachian .. ..	..	..	33,068,356	57.962
Ohio and Indiana .. ..	..	..	20,225,356	35.460
California .. ..	..	..	2,642,095	4.633
Colorado .. ..	..	..	390,278	.640
Kansas, Indian and Oklahoma Territories .. ..	..	..	69,700	.122
Texas .. ..	..	..	669,013	1.172
Louisiana .. ..	..	..	—	—
Wyoming .. ..	..	..	5,560	.010
Other Districts .. ..	..	..	492	.001
			*57,070,850	100.000
			1904.	
			Barrels.	Per Cent.
Appalachian .. ..	..	..	31,408,567	26.830
Ohio and Indiana .. ..	..	..	24,689,184	21.091
California .. ..	..	..	29,649,434	25.328
Colorado .. ..	..	..	501,763	.429
Kansas, Indian and Oklahoma Territories .. ..	..	..	5,617,527	4.799
Texas .. ..	..	..	22,241,413	18.999
Louisiana .. ..	..	..	†2,941,419	2.513
Wyoming .. ..	..	..	11,542	.009
Other Districts .. ..	..	..	2,572	.002
			117,063,421	100.000

*In addition to this quantity, 13,578 barrels were produced in Kentucky and Tennessee in 1899, for which, as none was sold or used, no value could be given.

†In addition to this quantity, 3,670,000 barrels were produced in Louisiana, and unsold at close of 1904.

RANK OF PETROLEUM-PRODUCING FIELDS, ACCORDING TO THE VALUE OF THE PRODUCT, IN 1904.

Field.	Rank.	Per Cent.	Value.
Appalachian	1	41.12	\$41,602,798
Ohio and Indiana	2	35.55	35,966,189
California	3	8.17	8,265,434
Texas	4	8.06	8,156,220
Kansas, Indian and Oklahoma Territories	5	5.39	5,447,622
Louisiana	6	1.06	1,063,605
Colorado	7	0.57	578,035
Wyoming	8	0.08	80,794
Michigan and Missouri	9	0.08	4,795
		100.00	\$101,170,466

It will be noted from the preceding table that there has been a considerable re-arrangement in five years in the relative amount of petroleum produced in the different fields, while the total production has more than doubled in the same period. The paraffin oils, however, those from the Appalachian, Ohio-Indiana, Colorado and Kansas fields, still form more than one-half of the output.

The rank of the different States as producers and the percentage of production in 1904 was: -

RANK OF PETROLEUM-PRODUCING STATES AND TERRITORIES, ACCORDING TO PRODUCTION, IN 1904.

			Rank.	Per Cent.	Barrels.
California	..	..	1	25.33	20,649,434
Texas	..	..	2	19.00	22,241,413
Ohio	..	..	3	16.13	18,876,631
West Virginia	..	..	4	10.80	12,644,686
Indiana	..	..	5	9.69	11,339,124
Pennsylvania	..	..	6	9.65	11,300,792
Kansas	..	..	7	3.63	4,250,779
Louisiana	..	..	8	2.51	2,941,419
Indian and Oklahoma Territories	..	..	9	1.17	1,366,784
Kentucky and Tennessee			10	0.85	998,284
New York	..	..	11	0.80	938,234
Colorado	..	..	12	0.43	501,763
Wyoming	..	..	13	0.01	11,542
Missouri	..	..	14		
Michigan	..	..	
					2,572
				100.00	117,063,421

In value of production the States ranked as follows: -

RANK OF PETROLEUM-PRODUCING STATES AND TERRITORIES, ACCORDING TO THE VALUE OF THE PRODUCT, IN 1904.

State.	Rank.	Per Cent.	Value.
Ohio	1	23.46	\$23,730,515
West Virginia	2	20.35	20,583,781
Pennsylvania	3	18.29	18,507,103
Indiana	4	12.09	12,235,674
California	5	8.17	8,265,434
Texas	6	8.06	8,156,220
Kansas, Indian and Oklahoma Territories	7	5.39	5,447,622
New York	8	1.51	1,526,976
Louisiana	9	1.06	1,068,605
Kentucky and Tennessee	10	0.97	984,938
Colorado	11	0.57	578,035
Wyoming	12	0.08	80,794
Michigan and Missouri	15	0.08	4,769
		100.00	\$101,170,466

Character of the Petroleums of North America.

Petroleums may be differentiated by their physical characteristics and their proximate chemical composition. They are mixtures of several series of hydrocarbons and their derivatives, in variable proportions and usually several and rarely all of the different series.

The determination of the proximate composition of crude petroleum has been hitherto attempted almost exclusively by distillation, and has, therefore, been confined to the separation of the more volatile components, although by means of distillation *in vacuo* hydrocarbons of very high boiling points over 350 degrees at 50 mm. pressure have been separated, but not as simple substances. More recently the writer has undertaken the study of residuals left after such distillation by means of solvents, with results of considerable interest.

The nature of the proximate constituents which have been referred to can be most readily demonstrated by consideration of the components of the oils from the various individual fields, the production of which has been described.

Appalachian Field.

The petroleums of the Appalachian field, which includes Western New York, Pennsylvania, West Virginia, South-eastern Ohio and Eastern Kentucky, are found in the strata of sand and pebble conglomerate from 100 feet above the Pittsburgh coal in the carboniferous to nearly 4,000 below it in the lower Devonian. They consist fundamentally of one series of hydrocarbons, C_nH_{2n-2} , and are therefore known as paraffin petroleums, although series less rich in hydrogen are present. The crude oil has in general a peculiar greenish colour by reflected light and a deep reddish-brown colour by transmitted

light. In exceptional cases light coloured oils are found, not darker than yellow or amber, which must have resulted from a selective filtration through strata which permit of the passage of only the less vicious hydrocarbons. The density of the Appalachian petroleum, as it occurs in the pipe line runs to the refineries, is from .80 to .82, 45.0 to 40.7 degrees B., a Pennsylvania pipe line oil examined by the writer in 1900 having a density of .8014, 44.7 degrees B., but oil of as low a density as .771, 51.6 degrees B., occurs in Washington county, Pennsylvania, higher than the average in the Berea grit in Ohio, and as high as .850, 33.7 degrees B., in West Virginia and Kentucky, some of the West Virginia oils being found to be extremely desirable lubricants after filtration and without distillation.

The examination of the crude petroleum of the Appalachian field has attracted the attention of numerous investigators, from the time of C. M. Wurren, 1865, to the present. The results enable us to form a satisfactory idea of the proximate composition and character of this oil. Oils from different parts of the field have shewn on examination in the writer's laboratory the following characteristics:—

	Ohio.	Pennsylvania.	Kentucky
	Noble Co.	Pipe Line.	Sunnyside.
Specific gravity, 25-25° ..	.8293	.8014	.8246
Flash	Ord.	Ord.	Ord.
Viscosity, Pa. R.R. Pipette..	42°	37°	—

Volatility in Open Dish.

	Per Cent.	Per Cent.	Per Cent.
150° .. 7 hours.	41.2	47.3	40.7
160° .. 7 hours.	43.3	58.0	44.5
200° .. 7 hours.	59.0	68.0	58.0

To constant weight:—

150° .. 42 hours.	48.7	58.7	70.6
160° .. 70 hours.	61.0	*71.8	73.8
200° .. 49 hours.	75.0	84.0	—

* 49 hours.

Viscosity of Residue.

7 hours at 200°	Soft	Soft	Soft
49 hours at 200°	Brittle	Brittle	—
Penetration	Pitch	Pitch.	—

Distillation Engler's Flasks.

Distillation begins..	85°	80°	67°
	Per Cent.	Per Cent.	Per Cent.
Below 150°	23.0	21.0	19.0
150-300°	21.0	41.0	37.0
300-350°	21.0	14.0	20.0
350-400°	27.0	23.0	20.0
Loss on acid treatment (150-300° fraction)	5.0	1.8	—
Percentage of acid used	2.5	2.0	—

Specific Gravity and Refractive Index.

	Ohio.		Pennsylvania.	
	Sp. Gr.	Ref. Ind.	Sp. Gr.	Ref. Ind.
Below 150° .. ..	.7297	1.412	.7188	1.415
150-300° .. ..	.8013	1.442	.7984	1.437
300-350° .. ..	.8404	1.468	.8338	1.462
350-400°8643	1.481	Paraffin	1.470

After acid treatment:—

150-300°8006	1.443	.7791	1.438
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Kentucky.

	Sp. Gr.	Ref. Ind.
Below 150°	—	—
150-300°	—	—
300-350°	—	—
350-400°	—	—

Distillation in Vacuo.

Atmospheric pressure:—		
120-170° .. ..	.7375	1.422
22 mm.		
90-120° .. ..	.7796	1.438
120-150° .. ..	.8267	1.451
150-180° .. ..	.8305	1.464
180-230° .. ..	.8494	1.474
230-290° .. ..	.8746	1.489
290-320° .. ..	.8863	1.504

Distillation of a Pennsylvania petroleum on a larger scale, carried on by Mabery, give the following results:

Fraction.	Per Cent.
50-150°	21
150-200°	11
200-250°	11
250-300°	13
Over 300°	42

(To be continued.)

SEPTEMBER IN THE PENNSYLVANIAN FIELDS.

There was much activity in the Pennsylvanian fields during September, yet a substantial decrease was noticed from that of a month previous. Though territory of the first class order continues to be an unknown quantity, the wells which were completed during the month shewed a gain in new production, several strikes above the ordinary being recorded in West Virginia and South-eastern Ohio. In the sections producing high grade oil, which includes the petroleum regions of Pennsylvania, New York, West Virginia and South-eastern Ohio, there were 661 wells completed during the month, including 38 gas wells and 109 dry holes, and the production was 5,805 barrels. This was a decline from August of 106 wells completed and 52 dry holes, accompanied by a gain of 112 barrels in the new production. West Virginia shewed a notable decline both in wells completed and new production during September, while in both rigs and wells drilling decided gains were made. There was also a heavy decline in the new production of the West Virginia districts in August, owing to the waning powers of the Keener sand pool at Point Pleasants, in Tyler county, which has been the most conspicuous district of the lower south-west for several months past. No new pool of any importance is in sight to take its place; and the number of wells now doing above 100 barrels a day can be counted with the fingers of a single hand.

Sixteen productive wells, which averaged 23 barrels each, was the record of the Wetzel-Tyler district in September. Mannington had 10 productive wells during the month with an average yield of 38 barrels, and at the close shewed more activity than any other section of West Virginia. Pyles Fork, which is a recent discovery in the Mannington district, is credited with several wells much above the average in productive capacity. Brook county again added three producing wells to the completed list, which averaged 67 barrels each, this being an exact duplicate of the August record.

At the end of the month the new work under way consisted of 265 rigs and 500 wells drilling, a net gain of 34 over the figures of last August.

In the Lima oil fields of North-western Ohio, operations continue to decline and nothing appears in prospect to bring about a revival of activity. September completed 135 wells, 10 of them were dry and the new production amounted to 1,015 barrels. This was a decline from August of 18 wells completed, 618 barrels production and five dry holes.

New work in the Buckeye oil fields at the close of September was composed of 66 rigs and 238 wells drilling, which was a decline of five rigs and five wells drilling from the report of August.

There was a heavy drop in the new production in the Illinois oil districts during September, consequent upon the efforts of the producers to curtail operations. An increase in field activity is shewn, but a large proportion of the drilling wells will be shut down as soon as the sand is reached, and allowed to remain in that condition until prospects are more encouraging for transporting and marketing the oil.

The total number of wells completed in America's eastern fields during September was as under:—

Field	Completed.	Production.	Dry.
Pennsylvania	661	5,805	147
Buckeye	135	1,018	10
Indiana	99	1,049	13
Illinois	449	9,705	19
Kentucky	23	415	8
Total	1,367	17,992	247

The work proceeding at the end of the month is shewn in the following table:—

Field	Rigs.	Wells Drilling.	Total.
Pennsylvania	265	500	765
Buckeye	66	138	204
Indiana	55	80	135
Illinois	61	374	435
Kentucky	16	23	39
Total	463	1,115	1,578

AMERICAN PIPE LINE RUNS DURING SEPTEMBER.

Following upon the decreased production of the Pennsylvanian fields during September, the pipe line runs also shew a decline, for the daily average of the Pennsylvania and Lima product during the month was 103,677 barrels, which was a decrease of 7,244 barrels from the average for August. The daily shipments from the producing districts of New York, Pennsylvania, West Virginia, Ohio, Kentucky, and Indiana averaged 150,215 barrels a day in September, which was a decline of 2,700 barrels a day from the August record. For September a year ago the daily shipments were 145,382 barrels.

Stocks in hand at the close of September, which includes the oil held by the Pennsylvania, Ohio and Indiana pipe lines (with the exception of the Tidewater Pipe Co., which no longer does a public business) amounted to 12,407,202 barrels, which was a decline of 1,154,828 barrels during the month. On August 31st the stocks were 13,562,030 barrels, which was a decline during the month of 653,417 barrels.

In spite of the suspension of drilling in many localities of the Mid-Continent oil fields, the stocks were increased 709,425 barrels in September and 912,004 barrels in August. On the last of the month the stocks of the Prairie Oil and Gas Co. had reached 22,106,674 barrels, which was 9,699,472 barrels more than the stocks of the entire Eastern oil fields. The total stocks in the Eastern and Western oil fields reached 34,513,876 barrels at the close of September.

In the following table the average daily runs and shipments of the Pennsylvania and Trenton-Rock fields are given since January last.

	Pennsylvania.	Buckeye.	Total.
January	71,740	43,072	114,812
February	69,949	41,067	111,016
March	73,213	38,991	112,207
April	73,415	39,912	113,327
May	75,615	39,404	115,019
June	74,841	39,320	114,161
July	73,218	37,321	110,539
August	—	—	110,921
September	—	—	103,677

The average daily shipments since the beginning of the year have been as under:—

	Pennsylvania.	Buckeye.	Total.
January	76,589	64,044	140,633
February	74,471	67,480	141,951
March	70,642	70,689	141,331
April	71,279	74,885	146,164
May	70,053	70,200	140,253
June	71,227	63,094	134,321
July	72,458	66,176	138,634
August	—	—	152,915
September	—	—	150,215

✻ ✻ AMERICAN OIL NOTES. ✻ ✻

THE OILPORT REFINERY.—We gather from the *Coalinga Oil Record* that work is rapidly progressing at the refinery at Oilport. The grading has been completed, foundations have been put in, and it is expected that the refinery will be in full operation early next year.

THE CALIFORNIA OILFIELDS, LTD.—Mr. Robert Balfour, M.P., of the Californian Oilfields, Ltd., has recently spent a few days in and around Coalinga, in the interests of the company. It may be mentioned that most of the company's wells are shut down, the present production being about 2,000 barrels daily.

PURE OIL COMPANY'S PIPE LINE.—It is announced that the Pure Oil Co. are about to lay a six-inch pipe for crude oil across the southern border counties of Pennsylvania to extend from the company's refinery and terminal at Philadelphia to a connecting point with the existing line into West Virginia. The new line will be about 275 miles in length.

THE LARGEST GAS WELL IN THE WORLD.—What is said to be the largest gas well in the world has been drilled at Kane, Pa., for it is estimated that its present production, 100,000,000 cubic feet of gas, the majority of which is still going to waste. The history of this gas gusher is a remarkable romance in oil country wild-cattling, for it was drilled over one mile from any other well, and upon territory that was considered to be practically worthless.

THE NATIONAL PETROLEUM ASSOCIATION.—The annual meeting of the National Petroleum Association of America was recently held at Atlantic City. The organisation, it should be mentioned, is composed of 33 members who are refining companies outside the Standard Oil Co. The annual report, which was considered as very satisfactory, stated that during the year a great deal of careful investigation had been done by the association into the subject of railway abuses. It was agreed that work should be proceeded with on similar lines during the present year.

SOUTH-EAST TEXAS PRODUCTION.—The production throughout the fields of south-east Texas during September was 30,370 barrels, as compared with a production of 31,200 barrels at the end of August. This decrease was mainly due to the Humble field, which is now steady declining. Saratoga, on the other hand, is increasing its yield, the present production being several hundred barrels more than it was at the end of August. Humble, however, still remains the largest producing field in Texas, the total yield for September being no less than 253,000 barrels.

A NEW COALINGA COMPANY.—The West Coalinga Oil Co. has recently been organised under the laws of the State of California with a capital of \$50,000. The company has acquired property within a couple of miles of Coalinga, located within a short distance from the great Lucile gusher.

KANSAS OIL FOR FUEL.—A dispatch from Tulsa, Indian Territory, states that the St. Louis and San Francisco Railway is now fitting its locomotives for the burning of petroleum as fuel. A contract has been entered into with the Standard Oil Co., by which the railway will use 30,000 barrels per month of residuum from the Neodesha refinery.

TEXAS QUOTATIONS.—Writing from Beaumont, under date of the 9th inst., a correspondent states that the price for Texas and Louisiana oil is as under:—Humble crude at the wells, 62 cents.; Batson oil at the wells, 60 cents.; Sour Lake at the wells, 60 to 65 cents.; and Spindle Top, 67 cents. The current figure for Jennings crude on cars is 75 cents.

AT JENNINGS.—Despite much activity, the production of the Jennings field continues to decline, and the average for September was about 18,000 barrels, as compared with 20,000 for the preceding month. Fifty-two wells are now producing in the field, of which 31 are being pumped, 20 operated with compressed air, and one self-flowing. This latter well is owned by the Crowley Oil and Mineral Co., and is now good for 800 barrels daily.

ANOTHER PIPE LINE FOR COALINGA.—Information is to hand recording a new proposal to lay another pipe line from Port Harford to Coalinga, the projected line being a Standard Co. enterprise. This line, which will be of larger dimensions than any of those now in operation will connect with the line from the Kern River district to Point Richmond, and will thus give the Standard Oil Co. an outlet for either Coalinga, Kern River, or Santa Maria oil to both Point Richmond and Port Harford.

NEW STRIKE IN SOUTHERN CALIFORNIA.—In Whittier county, California, the Murphy Oil Co. has brought in what is generally described as one of the largest wells ever seen in California. The well is between 3,000 and 4,000 feet deep, and according to the drillers, the oil sand was penetrated only about 12 feet. The Murphy Oil Co. has spent \$50,000 in development work in the locality in which the well has been struck, in order that the ground might be tested. The strike opens up a new field which is said to be seven to ten miles in length and three miles wide, the main geologic and stratific conditions being similar to those in the Santa Maria field.

Telegraphic Address:—"OLEINE."

Telephone Nos.:—{ 249 & 254 LIVERPOOL.
1990 MANCHESTER.

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DISTRICTS OF ENGLAND.

SPECIALITIES: All Grades of

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BENZOLINE AND BENZINE, SWANSDOWN WATER WHITE AMERICAN PETROLEUM

The American Oil Market.

New York, Week ended Oct. 13th.

Conditions in the older petroleum producing States, and especially in West Virginia, are going from bad to worse, and it appears that the supply of the high grades of oil generally classed as Pennsylvania crude will continue to decrease. The reports from these sections during the past week have been meagre, but they shew a very discouraging condition of affairs. In some districts where small wells have been the rule, the recent completions have fallen to the list of dry holes. In the entire lower south-west there is not a district that holds out any incentive to increase development work. Probably one-third of the completions proved destitute of oil, while not a large well has been reported. Development work is decreasing in most sections, says the *Oil, Paint and Drug Reporter*, and in West Virginia many operators are simply completing work already begun. If there was a single locality that looked promising operators would be getting in materials to continue operations during the winter, and even after the roads are in bad condition, but the prospects for a dull time in the lower south-west during the coming winter are quite apparent. With the completion of the work now under way, and the results no better than has attended development work in the past few weeks, the only district in the south-west that looked favourable for any considerable amount of new work will have been deserted. The pipe line reports for September indicate a considerable decrease in the total production of the older producing States, but these statistics are now of comparatively little value, except as shewing the variation in total runs and shipments. In the Mid-Continent fields, conditions shew no important change. In Texas and Louisiana the production is steadily declining, while the demand continues active, and stocks are decreasing. Latest quotations for Texas oil are:—Batson, 42@48c., as to gravity; Humble, 53c.; Saratoga, 49@50c.; Sour Lake, 45@56c., as to gravity.

REFINED AND PRODUCTS.—The demand for refined for export shewed some slackening off during the past week, probably due to the altered position of the tank fleet, as there is no change in the condition of the principal European markets. News from Russia has been somewhat more reassuring, but there is little progress being made towards resumption of shipments of oil to foreign ports. The engagements for export during the past week foot up about 200,000 barrels, all for shipment in bulk.

The price for barrelled oil for export has remained steady at 7.50c. for New York loading, and at 7.45c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are steady at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. 0d. to Continental ports, as to port and vessel.

Cases for export have been in light request, and sales of about 150,000 are reported. The price of plain tops has been steady at 10c. Freight rates are firm.

Crude for export has been in light request, and sales of about 20,000 barrels are reported. Pennsylvania crude is quoted at 7.50c. in barrels.

Naphthas have ruled firm. For export, sales of 2,000 barrels have been reported.

CLOSING QUOTATIONS.

CRUDE.		Week ended	
		Oct. 6, 1906.	Oct. 13, 1906.
National Tran. Certificates	per bbl.	\$1.58@1.59	\$1.58@1.59
Pennsylvania crude in bbls.	per gal.	7.50	7.60
Pennsylvania crude in bulk	.. ..	4.50	4.50
Residuum, bbls. for export	.. ..	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Oct. 13, 1905.	Oct. 13, 1906.
Tiona .. ..	.. ..	1.66	1.68
Pennsylvania .. ..	.. ..	1.56	1.58
North Lima .. ..	.. ..	0.94	0.90
South Lima .. ..	.. ..	0.89	0.85
Indiana .. ..	.. ..	0.89	0.85
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.34	1.30

REFINED—FOR EXPORT.

		Week ended	
		Oct. 6, 1906.	Oct. 13, 1906.
Cargo Lots for export..	per gal. ..	7.50	7.50
In bulk .. ..	.. ..	4.40	4.40
Philadelphia loading ..	.. ..	7.45	7.45

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Oct. 6, 1906.	Oct. 13, 1906.
3,000 to 10,000..	.. ..	10.05	10.15
1,000 to 3,000..	.. ..	10.20	10.20

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Oct. 6, 1906.	Oct. 13, 1906.
120 fire test, S.W. ..	per gal. ..	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13	13
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	12½@13½	12½@13½

NAPHTHA AND GASOLINE.

		Week ended	
		Oct. 6, 1906.	Oct. 13, 1906.
Naphtha, crude, car. lots, 68 @ 72 deg.	.. ..	15.00	15.00
Gasolene, 86 deg. ..	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from Oct. 5th to Oct. 11th were:—Oct. 5th, 107,186; Oct. 6th and 7th, 98,432; Oct. 8th, 109,093; Oct. 9th, 116,796; Oct. 10th, 118,820; and Oct. 11th, 110,242. For the month of August, 3,426,717.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—110,911; 126,321; 178,160; 165,097; 156,655; 160,192. For the month of August, 4,740,362.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended October 12th and from Jan. 1st, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	223,400	9,742,400	9,980,800
Refined, cases	144,000	11,196,000	16,712,000
Crude, barrels and bulk..	21,400	1,287,500	970,800
Crude, cases	—	285,000	164,000
Naphtha, barrels..	2,200	257,800	464,000
Residuum, barrels ..	—	580,200	822,700
Lubricating, barrels ..	—	218,200	135,600
Total, barrels cde. eq. ..	427,351	19,712,888	21,336,110

CLEARANCES FOR THE WEEK.

During the week ended Oct. 12th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	7,807,400	357,157,334	396,774,206
Crude	—	232,900	929,594
Naphtha	133,300	13,973,784	10,918,533
Residuum	—	3,619,600	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Oct. 12th ..	10,409,867
Total from New York, from Jan. 1st, 1906 ..	477,127,014
Same period last year	530,561,871
Decrease	53,435,857
From United States, week ended Oct. 12th ..	21,753,936
Total from United States, since Jan. 1st, 1906 ..	944,526,877
Same period last year	999,210,339
Decrease	54,683,462

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The "Review" Shipping List.

OCTOBER 25, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE.	Philadelphia	Sables d'Olonne	P. Del. Break., Oct. 5	HOTHAM	Middlesbro'	Constant'ple	P. Sagres, Oct. 21
ALCHYMIST	Terneuse ..	Bordeaux ..	L. Oct. 79	NEWTON	San Francisco	Muronan ..	L. Sept. 18
AMERICAN	New York ..	San Diego ..	L. Sept. 17	HOUSATONIC	—	—	Tr. on Lakes btn. U.S. and Can.
APPALACHEE	San Francisco	Shanghai ..	L. Oct. 6	IMPERIAL	—	—	—
APSCHERON	Novorossisk	Genoa	Arr. Batoum, Oct. 14	JOANNIS COUTZIS	Piræus	Ismailia	L. Oct. 18
ARAL	Tyne	Philadelphia	L. Oct. 22	J. B. AUG. KESSLER	Philadelphia	Calcutta	At Port Said, Oct. 8-9
ARAS	New York & Hull	Tyne	P. Flambro' Hd, Oct. 24	JAMES BRAND	Philadelphia	Blaye	P. Del. Break, Oct. 9
ARGYLL	Kahului	Port Harford	L. Oct. 10	KURA	Kustendje ..	London	Arr. Port Talbot, Oct. 22
ASTRAKHAN	Tyne	Philadelphia	L. Oct. 20	LA CAMPINE	Antwerp	Philadelphia	P. Scilly, Oct. 14
AUGUST KORFF..	Hamburg ..	Philadelphia	Arr. Tyne, Oct. 22	LA FLANDRE	Ghent	New York ..	P. Scilly, Oct. 14
AUREOLE	Tyne	Philadelphia	Arr. Oct. 14	LA HESBAYE	Antwerp	Philadelphia	P. Scilly, Oct. 23
AZOV	—	—	Trading on W.C. of South Amca. P. Finisterre, Oct. 18	LA MADELEINE ..	Antwerp	Genoa	Arr. Oct. 18
BAKU STANDARD	Tyne	—	—	LA VIGUESA	Vigo	Philadelphia	L. Oct. 11
BALAKANI	London	Philadelphia	Arr. Oct. 13	LACKAWANNA	New York ..	Savona	L. Oct. 14
BATOUM	Tyne	Philadelphia	P. Dunnet Head, Oct. 23	LE COQ	Havre	Philadelphia	Sp., 50 N. 26 W., Oct. 15
BAYONNE	Hull	New York ..	P. Dunnet Head, Oct. 13	LOUTSCH	—	—	Tr. btwn. Odessa & Novorossisk
BEACON LIGHT ..	Batoum	Cardiff	P. Barry Island, Oct. 23	LUCERNA	Tyne	Philadelphia	Arr. Oct. 16
BEME	Rangoon ..	Kurrachee ..	L. Oct. 10	LUCIFER	Penarth	Philadelphia	P. Browhead, Oct. 23
BLOOMFIELD	Tyne	Philadelphia	L. Oct. 19	LUCIGEN	Tyne	Philadelphia	Arr. Oct. 13
BORJOM	Alexandria ..	Batoum	Arr. Oct. 9	LUCILINE	Tyne	Philadelphia	P. Dunnet Head, Oct. 24
BRILLIANT	Göthenburg	New York ..	Arr. Oct. 24	LUMEN	Rouen	Tyne	Arr. Oct. 21
BROADMAYNE	Port Arthur (Texas)	Birkenhead	Arr. Birkenhead, Oct. 20	LUX	Rouen	Kustendje ..	P. Tarifa, Oct. 20
BULLMOUTH	Singapore ..	Kobe	Arr. Oct. 21	MAKKAVEI	—	—	Trading in Black Sea
BULYSES	Balekappan	Port Natal ..	Arr. Oct. 7	MANHATTAN	Messina	New York ..	P. Gibraltar, Oct. 14
BURGERMEISTER	Philadelphia	Oxelosund ..	L. Oct. 17	MANNHEIM	Tyne	New York ..	L. Oct. 22
PETERSEN	—	—	—	MARGARETHA ..	Kustendje ..	Antwerp	Arr. Oct. 24
CADAGUA	Rouen	Kustendje ..	L. Oct. 17	MEXICAN PRINCE	Liverpool ..	Port Arthur (Texas)	L. Oct. 4
CALCUTTA (Br. bq.)	San Francisco	Shanghai ..	Arr. Oct. 18	MIRA	Batoum & Thameshaven	Cardiff	P. Prawle Pt., Oct. 24
CARDIUM	Singapore ..	Balekappan	L. Oct. 20	MUREX	Nagasaki ..	Balekappan	Arr. Oct. 22
CAUCASIAN	Philadelphia and Cardiff	Liverpool ..	Arr. Oct. 23	NARRAGANSETT..	New York ..	London	P. Dover, Oct. 24
CHARLOIS	Philadelphia	Amsterdam	P. Del. Break, Oct. 10	NERITE	—	—	Tr. in China Seas
CHESAPEAKE	London	New York ..	P. Lizard, Oct. 19	NEW YORK	New York ..	Southampton	L. Oct. 20
CHESTER	Philadelphila	Antwerp	Arr. Oct. 23	OCEAN	Amsterdam	Philadelphia	P. Lizard, Oct. 23
CIRCASIAN	—	—	Trading on W.C. of South Amca. L. Oct. 18	ORANJE PRINCE..	Banes	Flushing....	In Downs, Oct. 22
CLAM	Balekappan	—	L. Oct. 19	ORIFLAMME	Tyne	Philadelphia	Oct. 22
COWRIE	Port Natal ..	—	P. Lizard, Oct. 24	OSCEOLA	Newport Nws.	Wilmington..	Arr. Oct. 21
CYMBELINE	Philadelphia	Antwerp	Oct. 24	OTTAWA	Philadelphia	Vera Cruz ..	Arr. Oct. 11
CZAR NICOLAI II.	Hamburg ..	Batoum	P. Gibraltar, Oct. 23	OURAL	Antwerp	Port Arthur (Texas)	P. Del. Break, Sept. 23
DAGHESTAN	Tyne	Batoum	L. Oct. 23	PALEMBANG	—	—	Arr. Oct. 11
DAKOTAH	San Francisco	Shanghai ..	L. Sept. 24	PAULA	Oporto	Philadelphia	Tr. Sts. Settlem'ts & China Seas
DELAWARE	Manchester	New York ..	Arr. Oct. 18	PECTAN	Galveston ..	Port Arthur (Texas)	L. St. Michael's, Oct. 18
DEUTSCHLAND ..	Savona	New York ..	Arr. Oct. 16	PENNOIL	Philadelphia	Rotterdam ..	Arr. Oct. 21
DIAMAN	New York ..	Stettin	Arr. Oct. 23	PERLAK	Singapore ..	Samboe & Palembang	Arr. Oct. 19
ELAX	Samboe	—	L. Port Natal, Oct. 16	PHOEBUS	Hamburg ..	New York ..	L. Sept. 29
ELISE MARIE	Stettin	New York ..	Arr. Oct. 23	PINNA	Manchester	Hamburg ..	L. Tyne, Oct. 15
ENERGIE	New York ..	Königsberg	L. Oct. 20	POTOMAC	Tyne	New York ..	L. Eastham, Oct. 23
ERIVAN	Antwerp	Philadelphia	Arr. Oct. 24	PROMETHEUS	New York ..	Rotterdam ..	Arr. Oct. 21
EUPLECTELA	Philadelphia	Dover	Sp., 50 N. 30 W. L. Algiers, Oct. 14	PRUDENTIA	Bremen	Wilmington	L. Oct. 17
EXCELSIOR	New York ..	Venice	Oct. 14	RION	Ibrail	Hull	Arr. Oct. 10
EZIO	—	—	Coasting Peru	ROCK LIGHT	Cardiff	Kustendje ..	Off Ushant, Oct. 24
FRANCE MARIE ..	Philadelphia	Alicante	P. Del. Break., Sept. 30	ROSSIJA	Novorossisk and Trieste	Hamburg ..	P. Tarifa, Oct. 18
GEESTEMUNDE ..	New York ..	Hamburg ..	Arr. Sept. 23	ROTTERDAM	Amsterdam	New York ..	Arr. Malta, Oct. 21
GENESSE	New Orleans	Philadelphia	L. Oct. 5				Arr. Oct. 23
GEORGIAN	Tyne	Girgenti	P. Sagres, Oct. 13				
PRINCE	—	—	—				
GOLDMOUTH	Singapore ..	Blexen	L. Rotterdam, Oct. 24				
GUT HEIL	Bremerhaven	Philadelphia	Arr. Hamburg, Oct. 15				
HAINAUT (Dch.shp.)	Taganrog ..	—	P. Kertch, Oct. 22				
HARRY	Cette	Kustendje ..	Arr. Oct. 15				
WADSWORTH	—	—	—				
HELIOS	Syria	Trieste	L. Port Said, Oct. 12				

Vessel.	From.	For.	Latest Date and Position.
RUSSIAN PRINCE SALAHADJI	Philadelphia	Liverpool ..	Arr. Sept. 20 Tr. Sts. Settlem'ts & Java Seas
SEMINOLE..... SILVERLIP	San Francisco Barrow	Calcutta Cardiff.....	L. Sept. 21 P. Barry Island, Oct. 24
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Manchester	Philadelphia	P. Eastnam, Oct. 16
SOPHIE	Venice.....	Kustendje ..	L. Const'ple, Oct. 18
SPONDILUS	Tyne	Singapore ..	At Port Said, Oct. 14
STANDARD	Pillau and Tyne	Philadelphia	L. Tyne, Oct. 13
STROMBUS	Cardiff	Singapore ..	Arr. Oct. 2
SURAM	Newport	New York ..	Arr. Oct. 19
SUWANEE	London	Kustendje ..	P. Southend, Oct. 21
SVIET	Batoum	Odessa	L. Sept. 29
TELENA	Singapore ..	—	L. Natal, Oct. 8
TEREK.....	London	New York ..	P. Scilly, Oct. 12
TIFLIS	Kustendje ..	Antwerp	P. Constant'ple, Oct. 17
TIOGA	Flushing....	New Orleans	L. Oct. 4
TONAWANDA	Hong Kong..	San Francisco	Arr. Oct. 6
TROCAS	Hong Kong..	—	Arr. Singapore, Oct. 8
TURBO	Cardiff	Genoa	L. Oct. 22
TUSCARORA	Bombay	Hong Kong	L. Sept. 17
TWINGONE	Rangoon....	Madras	L. Oct. 20
VEDRA	Cardiff.....	Genoa.....	L. Oct. 23
VILLE DE DIEPPE	—	—	In Havre, Oct. 18
VILLE DE DOUAI	Ibrail	Campana ..	Arr. Rio de la Plata, Oct. 4
VOLUTE	Balekpappan	—	L. Oct. 15
WEEHAWKEN	Halifax	Philadelphia	Arr. Oct. 14
WILLKOMMEN ..	Philadelphia	Danzig	P. Butt of Lewis, Oct. 18
WINNEBAGO (late Kinsman)	San Francisco	Hankow	Arr. Oct. 3

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

October 26th, 1906.

The price of Refined Petroleum is unchanged, but there is very little business doing.

The latest quotations are:—Russian and Roumanian, 6½d.; American, 6½d.; Water White, 7½d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £7 to £9 10s.

American dark cylinder, from £7 2s. 6d.

American filtered cylinder, from £11.

Shellene, £5.

No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine, although it has been fluctuating slightly during the week, is still firm at 48s. 9d. for Spot, and 49s. up to the end of the year, 50s. being asked for the first four months of next year.

LIVERPOOL OIL MARKET.

October 25th.

Refined oils are quiet, and sellers now quote 5½d. for Russian, Galician or Roumanian; and 6½d. to 7½d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, October 25th.

Refined, in cases, is lower at 10.00; Standard White, 7.50; Credit balances, 1.58c.

PHILADELPHIA, October 25th.

Standard White is still quoted at 7.15.

RUSSIA.

BAKU, October 22nd.

The Baku oil market is quiet, and prices shew a tendency to decline. Light crude oil, spot, 24½ copecs per pood, future delivery 22 to 23 copecs; residuals, spot 29 copecs.

BELGIUM.

ANTWERP, October 17th.

The petroleum market is unchanged. Price of Standard White, spot, 19½ francs per 100 kilos.; and three last months of the year 20 francs.

FRANCE.

PARIS, October 17th.

Illuminating oil is quoted in bulk, in whole tank waggons, 20.50 francs per hectolitre; spirit, 25.25 francs per hectolitre. Special white oil, 28.50 francs per hectolitre.

GERMANY.

HAMBURG, October 20th.

The kerosene market is firm. The price of American Standard White is 6.80 marks per 50 kilos.

ROUMANIA.

October 14th.
Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs.	...	3.80-4.00
Refined oil, exclusive of taxes	...	12.00- —
Motor benzine, including taxes	...	16.00-18.00
Benzine, doubly refined	...	21.00-25.00
Residuals in tank waggons, at refinery	...	3.20-3.30
Paraffin	...	120.00-125.00
Lubricating Oils —		
Agricultural...	...	30-32
Prime	...	35-37
Extra	...	40-42
Royal	...	45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilo.

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs.	7.50- 8.00
Benzine, sp. gr. 0.710-0.715 ...	15.00-16.00
" sp. gr. 0.720-0.725 ...	14.00-15.00
" sp. gr. 0.730-0.740 ...	11.00-12.00
" sp. gr. 0.745-0.755 ...	7.00- 8.00

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— QUOTATIONS ON APPLICATION.

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for
this Journal by . . .
the Custom House. .

FOR THE WEEK ENDED OCTOBER 15TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALS.	PORT WHENCE.
Oct.	LONDON—			
9	London & India Docks Co..	M.Lub.	1,200	Hamburg
9	Fielder, Hickman and Co..	Lub.	2,400	New York
9	Anglo-American Oil Co. ..	Lub.Gr.	3,000	"
9	" ..	Lub.	46,200	Philadel.
9	" ..	Lub.Gr.	2,000	"
10	Schliemans Oil Co. ..	Lub.	1,850	Hamburg
11	G. W. Sheldon and Co. ..	"	200	Antwerp
11	R. Park and Co. ..	"	1,180	Marseilles
11	Stern, Senneborn Oil Co. ..	Lub.Gr.	1,200	New York
11	Worthington and Boler ..	Lub.	5,640	Philadel.
11	Anglo-American Oil Co. (Chesapeake)	"	132,170	"
11	" ..	Gas	1,224,530	"
11	Bowring Petroleum Co. (Lucifer)	Lamp	1,419,550	"
12	Homelight Oil Co. (Mira) ..	"	785,570	Batoum
12	" ..	"	624,550	"
12	London and Thames Haven Oil Wharves (Daghestan)	Lub.	318,000	"
12	" ..	"	25 000	"
14	G. W. Jennings ..	"	2,490	New York
15	G. W. Sheldon and Co. ..	"	600	"
15	W. Balchin ..	"	52,000	Philadel.
15	" ..	"	10,400	Hamburg
15	London Oil Storage Co. ..	"	3,110	"
15	Leach and Co. ..	"	180	Ghent
	LIVERPOOL—			
9	Anglo-American Oil Co. (Snowflake)	M Lub.	450,540	Philadel.
9	C. C. Wakefield ..	M.L.Gr.	500	Antwerp
10	Liverpool Storage Co. ..	Lub.	4,400	New York
11	" ..	"	53,800	Philadel.
11	G. B. Taylor ..	"	8,000	"
11	" ..	"	1,200	"
11	Worthington and Boler ..	"	2,400	"
11	W. B. Dick and Co. ..	"	2,620	"
11	" ..	"	12,440	"
11	" ..	"	2,300	"
11	Meade-King, Robinson & Co. ..	"	44,590	"
11	" ..	Lamp	20,000	"
11	Crew, Leveck and Co. ..	Lub.	13,240	"
12	Vacuum Oil Co. ..	"	8,400	New York
13	J. Nall and Co. ..	Lub.Gr.	600	Philadel.
13	A. Hopps and Sons ..	Lub.	10,410	Baltimore
13	Meade-King, Robinson & Co. ..	"	16,400	Philadel.
15	" ..	"	2,400	"
15	" ..	"	7,200	Baltimore
15	" ..	"	20,800	Hamburg
15	" ..	"	10,000	Quebec
15	Ismay, Imrie and Co. ..	"	280	New York
15	Liverpool Storage Co. ..	"	1,600	"
15	Gracie, Beazley and Co. ..	"	500	"
	BRISTOL—			
10	H. R. James and Sons ..	"	7,400	"

DATE.	PORT AND IMPORTERS.	DESCRIP- TION.	NO. OF GALLS.	PORT WHENCE.
Oct.				
11	First Anglo-Russian Oil Co.	M.Lub.	510	Antwerp
11	W. Smith and Co. ..	"	32,000	New York
11	" ..	Lamp	1,400	"
11	Anglo-Bosphorous Oil Co..	Lub.	1,200	Hamburg
	CARDIFF—			
12	Guthrie, Heywood and Co.	M.Colza	2,540	Baltimore
	HULL—			
10	Anglo-American Oil Co. (Bayonne)	Lamp	597,960	New York
10	T. Wilson, Sons and Co. ..	Lub.	3,040	"
10	" ..	"	8,800	"
	MANCHESTER—			
9	Geo. B. Taylor ..	M.Lub.	36,200	Philadel.
10	Anglo-American Oil Co. (Delaware)	Lamp	853,560	"
	MIDDLESBRO'—			
9	J. J. Sutherland ..	Lub.	2,400	Antwerp
	NEWCASTLE—			
12	Tyne-Tees S.S. Co..	"	240	"
	SWANSEA—			
12	Burgess and Co. ..	L.Paste	370	Hamburg
	DUNDEE—			
11	D. Alexander and Sons ..	Crude	200	"
	GLASGOW—			
10	J. and A. Allan ..	Lub.	400	Boston
11	Anchor Line ..	"	65,550	New York
12	J. and A. Allan ..	"	22,450	Philadel.
	GRANGEMOUTH—			
11	W. Graham-Yooll and Co.	Lamp	2,000	Hamburg
12	J. Currie and Co. ..	Lub.	6,000	"
	LEITH—			
9	G. Gibson and Co. ..	"	680	Antwerp
	DUBLIN—			
9	Anglo-American Oil Co. (Hermione)	Lamp	1,699,800	New York
	Total for the Week	"	8,702,440	

FOR THE WEEK ENDING OCTOBER 22ND 1906—

Oct.	LONDON—			
16	Asiatic Petroleum Co. (Goldmouth)	Benzine	591,000	Pulo Samboe
16	" ..	"	66,000	"
16	Anglo-American Oil Co. (Suwanee)	Naph.	701,900	Kustendje
16	" ..	Benzine	147,980	"
16	" ..	Naph.	18,000	"
16	" ..	Lamp	133,990	"
16	" ..	Naph.	719,900	"
16	" ..	Benzine	147,980	"
17	" ..	Naph.	40,000	"
17	" ..	Benzine	40,000	"
17	" ..	"	107,980	"
17	" ..	Naph.	679,900	"
17	London and India Dock Co.	M.Lub.	400	Hamburg
17	Scott's Wharf ..	"	4,000	New York
18	A. Brown and Co. ..	Lub.	560	Hamburg

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DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
18	G. W. Sheldon and Co.	M.L.Gr.	300	Antwerp
18	"	M.Lub.	500	"
18	W. B. Dick and Co.	Lub.	4,750	Philadel.
18	"	"	6,130	"
18	Fielder, Hickman and Co.	"	4,800	"
18	London and India Docks Co.	Lub. Gr.	3,200	New York
19	T. H. Lee	Lub.	210	Hamburg
19	Beck and Pollitzer	"	1,428	Philadel.
19	Mordaunt Bros.	"	4,200	"
19	Bowring Petroleum Co.	"	8,340	"
19	Produce Brokers	"	4,800	"
20	Anglo-American Oil Co.	"	26,000	"
20	"	Lub.Gr.	2,400	"
20	Scott's Wharf	M.Lub.	4,000	New York
21	Consolidated Pet. Co. (Kura)	Lamp	882,000	Kustendje
20	Ragosine and Co.	"	285	Alexandria
22	Anglo-American Oil Co.	Lub.	46,000	Philadel.
22	"	Lub.Gr.	1,000	"
22	G. W. Sheldon and Co.	"	120	Antwerp
22	J. L. Lyon and Co.	Turps Sub.	382	"
22	G. W. Sheldon and Co.	Lub.Gr.	2,082	New York
22	"	Lub.	890	"
LIVERPOOL—				
17	J. Nall and Co.	M.Lub.	250	Philadel.
17	Vacuum Oil Co.	"	8,000	"
17	Crew, Levick and Co.	"	1,400	"
17	"	"	9,660	"
17	George B. Taylor	Mill Gr.	11,080	"
17	Liverpool Storage Co.	M.L.Gr.	1,200	New York
17	Pickfords	M.Lub.	370	Hamburg
17	"	M.L.P.	1,000	"
21/9	Anglo-Amer. Oil Co. (Tioga)	Gas	1,480	Philadel.
21/9	Meade-King, Robinson & Co.	"	9,650	Batoum
28/9	Anglo-American Oil Co.	Lamp	20,920	New York
18	Meade-King, Robinson & Co.	Lub.	6,400	Philadel.
18	McGetric Bros.	M. Gr.	4 ⁰⁰	Boston
18	W. B. Dick and Co.	Lub.	3,000	Philadel.
18	Worthington and Boler	"	1,600	"
19	Meade-King, Robinson & Co.	"	2,400	Baltimore
22	"	Gas	546,180	Port Arthur
22	"	Crude	451,000	"
22	"	Resid.	6,000	Trieste
22	"	M.Lub.	8,000	New York
22	Liverpool Storage Co.	Lub.	2,400	"
22	Burnaby and Chantrell	Lub.Gr.	500	"
22	W. Gibson and Sons	Lamp	2,050	Boston
BRISTOL—				
17	Pickford's, Ltd.	Lub.	290	Antwerp
18	W. Smith and Co.	"	26,400	New York
19	Pickfords	"	760	Hamburg
19	H. R. James and Sons	"	1,000	New York
20	Canadian Pacific Railway	"	12,000	Montreal
GLOUCESTER—				
16	Bristol Steam Navigation Co	"	280	Hamburg
GOOLE—				
19	Goole Steam Shipping Co.	M.Lub.	160	Antwerp
22	"	"	600	"
GRIMSBY—				
16	J. Sutcliffe and Son	Lub.	1,660	"
HULL—				
12	Thos. Wilson, Sons and Co.	"	71,600	New York

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
12	Hull and Nether. S.S. Co.	Tar Oil	3,600	Rotterdam
13	Wilsons and N.E. Railway Shipping Co.	Lub.	5,200	Antwerp
15	Hull & Netherlands S.S. Co.	Tar Oil	2,200	Rotterdam
15	Helmsing and Son	Lub.	4,000	Riga
15	W. Gillyott and Co.	M.Lub.	4,800	New York
15	Wilsons and N.E. Railway Shipping Co.	Lub.	550	Hamburg
15	"	"	10,400	"
15	"	"	480	Antwerp
19	"	"	320	"
22	W. Gillyott and Co.	"	1,200	New York
MANCHESTER—				
12	Anglo-American Oil Co.	M.Lub.	440,000	Philadel.
16	W. Hodgson and Co.	M.L.Gr.	600	New York
16	Lamport and Holt	M.Lub.	1,300	"
16	Bramwell Fern and Co.	"	1,850	"
16	Geo. B. Taylor	"	240	Hamburg
16	"	"	163,880	New York
16	J. T. Fletcher and Co.	"	1,200	Antwerp
16	"	M.L.Gr.	320	"
19	Bramwell Fern and Co.	M.Lub.	850	"
20	General Pet. Co. (Pinna)	Lamp	756,000	Pt. Arthur
MIDDLESBRO—				
20	E. Harris and Co.	L.Gr.	120	Antwerp
NEWCASTLE—				
15	Tyne-Tees Steamship Co.	Lub.	480	Hamburg
16	"	R.M.Lub.	960	Antwerp
20	"	M.Lub.	600	"
20	"	"	210	Hamburg
DUNDEE—				
18	D. Alexander and Sons	Crude	200	Hamburg
GLASGOW—				
16	Anchor Line	M.Colza	3,170	New York
16	"	Lub	33,120	"
16	"	M.Grease	400	"
LEITH—				
15	J. Currie and Co.	Lub.	2,180	Hamburg
15	G. Gibson and Co.	"	2,000	Antwerp
18	J. Currie and Co.	"	3,220	Hamburg
20	W. Graham-Yooll and Co.	Lamp	1,310	"
22	"	"	2,180	"
BELFAST—				
19	J. C. Pinkerton and Co.	Lub.	320	Antwerp
Deduct to Correct—			7,062,637	
LONDON—				
28/9	Asiatic Petroleum Co. (Silverlip)	Benzine	17,500	Pulo Samboe
3/10	"	"	102,780	"
LIVERPOOL—				
24/9	Meade-King, Robinson & Co. (Vedra)	Lamp	42,170	Batoum
MANCHESTER—				
10/10	Anglo-American Oil Co. (Delaware)	"	23,260	Philadel.
DUBLIN—				
6/9	Alliance and Dublin Gas Co. (Kura)	Gas	5,807	Batoum
Total for Week			6,871,120	
Total for the past Fortnight			15,573,560	

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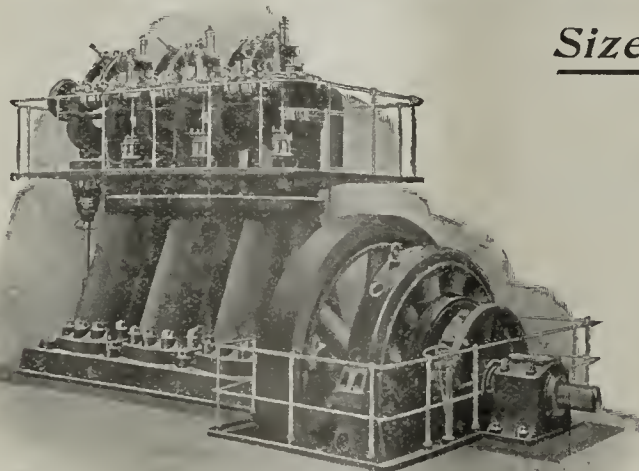
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

NOVEMBER 10TH, 1906.

No. 385.

Editorial Notes.

The Conference at St. Petersburg. The lengthy report which we publish in this issue of the proceedings at the St. Petersburg Conference will, we feel sure, be perused with considerable interest by our readers.

The natural consequences of the disorders and the continued unsettled feeling at the Baku oil fields rendered it highly desirable that such a conference should take place, and seeing that liquid fuel plays such an important part in connection with the industrial life of Russia, it is easy to conjecture the alarm felt among the manufacturing community by the present outlook. Were it not for liquid fuel, the central and eastern portions of the Russian empire would be placed in a most deplorable position, and hence it is that the present scarcity of the fuel has caused the manufacturers to seriously consider the question. Once placed upon a basis which is permeated with the principles of commerce, the Russian petroleum industry is quite capable of more than meeting the needs of the great industrial centres in Russia in regard to their liquid fuel supply, but as Mr. Gukasoff pointed out, the time has now come for the Government to consider whether the system by which they lease their lands to the producers is a proper one. When one considers the question of prices for liquid fuel in the interior, it is plain that the present system adopted by the Government might with advantage be considerably improved.

Unrest Among the Baku Workers. Our own correspondent at Baku, writing under the date of October 12th (o.s.), comments upon the feeling of unrest which is still prevalent among the workers at the Baku oil fields.

The murder of Mr. Snarsky, the property manager of a local petroleum company, stands out as the second successful attempt on the part of the workmen to have revenge, but now, says our correspondent, it is rumoured in Baku that the lives of at least two other managers hang in the balance, and the workmen intend to strike again at the first favourable opportunity. Our readers will recollect that in our issue of September 29th our representative at Baku explained that the measures which were adopted in order to terminate the strikes augur no good for the various companies concerned, and if any reliance can be placed upon the rumours now prevailing, the Baku industry is within an ace of receiving another set back. In the interests of all that appertains to the welfare of the Baku petroleum industry we ardently hope that the more amicable arrangements now established will permanently prevail and become stronger as time goes on.

At Last. A Gulf pipe Line to be Laid. After much waiting, and ten thousand rumours, we are now in a position to state that a trunk pipe line is to be laid from the Mid-Continental oil fields of America to the Gulf of Mexico as speedily as possible, with the completion

of which scheme the great difficulties now surrounding the developments in those central fields will disappear. We have reason to believe that no less than three similar pipe-line projects are now being seriously discussed between interested parties, but the only one which has thus far matured to allow its being referred to in these columns is that to be laid by the Texas Co., and which has necessitated that company's raising additional capital in order to spend about one and a-quarter millions sterling upon the construction of the pipe. We have dwelt upon the importance of this proposal over and over again; it therefore only remains for us now to say that the carrying out of the proposition will go far toward lifting the American petroleum industry to a higher plane of prosperity than it has occupied previously.

Developments in Canada. Though the Canadian Government bounty upon petroleum produced in Canada was calculated to immediately stimulate developments, it has taken a

fairly long time ere bustling activity has been introduced into the search for petroleum in that part of our dominions. True, the operating companies have been working energetically, where finances would permit, in drilling new areas in order to increase production, but a great amount of lethargy has been apparent for a long time in regard to Canadian developments. But that semi-comatose state is about to give way to a period of bustle, and we have every reason to believe that during next summer Canada's petroleum resources will be developed to an extent as yet undreamt of by the majority of our readers. The Canadian Oil Fields, Ltd., a concern which owns enormous tracts of proven land within the oil belt, is shortly to replenish its funds in order to strike out in what gives promise of being a career of remarkable success, for it is now been found that the very prolific Tilbury oil field adjoins its present developments. Then the Ontario Lands and Oil Co. is to put forward increased energy in the development of its holdings, while lastly a new Anglo-Canadian Co. has been registered at Somerset House during the past few days to exploit other localities in Canada with a view to petroleum production. We certainly hope the respective concerns will meet with success sufficient to encourage them to launch out even to a greater extent in order that Canada's mineral wells may be turned to good account.

America's September Exports. The pronounced decline which has been noted in the exports of American petroleum products continued during September, the decrease being very substantial both in amount and value. As will be seen from

the figures given upon another page of this issue, the total figures for September were about 98,000,000 gallons, and were valued at \$6,600,000, as compared with 110,000,000 gallons exported during the preceding month, and 116,000,000 gallons exported for the corre-

sponding period of last year. The decrease is accounted for in part by the position of the tank fleet during the month, but what strikes us more forcibly is the continued injury which the American oil trade has suffered by the unjustifiable stand made by the American Government against what it is pleased to call the "Trust" methods. What with the continually increasing stocks above ground in many of the producing localities on the one hand, and the decreasing export trade on the other, the outlook for the American producer is far from rosy at the present time.

LATEST FROM GALICIAN OIL FIELDS.

The Wanda well of Messrs. Bloch and Co. at Boryslaw, which was drilled on contract by Mr. Sholman, has since October 12th been yielding 30 to 40 tons daily from a depth of 1,030 metres. The success of this well, situated towards Mraznica, is a good omen for the southern part of the Boryslaw oil region. The Ural well, situated close to the above-mentioned well, has likewise become productive to the extent of 30 to 40 tons daily. In this locality are situated the following properties—Alexander, Brilliant, Ignatz, Wiara, etc.

The Wilhelm well of Messrs. Barth and Liebermann, which was completed in six months, now yields 20 tons daily.

At Niebylow a new company has been formed to exploit the ozokerit deposits. The founders are Dr. Ungar Weisniewski and Dr. Deskur. The first borehole is to be started this month.

In Western Galicia boring will soon be started by the Deutsche Tiefbohr-gesellschaft with four rigs of their own system at Kobylanka, Wietrzno, Bobrka and Rogi. At Wietrzno they are going to deepen a well drilled by Mr. Laszcz to a depth of 400 metres; at Rogi they will start a well about 120 metres south of the property of Messrs. Perutz and Co. All these wells will be situated on the southern saddle of the petroliferous line at Kobylani-Wietrzno-Bobrka-Rogi, which has not hitherto been exploited. The only well drilled on this saddle some years ago yielded a great deal of natural gas. Professor Zuber considers this southern saddle as more prolific than the hitherto exploited northern saddle. All these lands have been acquired by the Deutsche Tiefbohr-gesellschaft from Mr. Laszcz.

ROUMANIAN PETROLEUM EXPORTS FOR SEPTEMBER.

The exports of petroleum products from Roumania in September were as under:—

Destination.	Crude oil, distillate, Illum. gas oil, etc. oil.	Benzine.	Total.
England	— 9,472	2,875	12,347
France	148 5,115	2,096	7,359
Italy	— 4,033	—	4,033
Austria-Hungary ..	1,437 899	275	2,611
Turkey	16 2,261	—	2,277
Germany	21 —	1,450	1,450
Bulgaria	78 178	21	297
Servia	17 —	—	17
Total, Sept., 1906 ..	1,696 21,978	6,717	30,391
„ „ 1905 ..	6,435 4,152	4,706	15,293

The exports of various petroleum products from Roumania during the first nine months of 1906, compared to the corresponding period of 1905 and 1904, were as under:—

	9 Months. 1906	9 Months. 1905	9 Months. 1904
Crude Oil, Distillate, Gas Oil, etc.	30,644	34,491	40,744
Illuminating Oil	156,689	61,123	60,089
Benzine	51,583	36,955	30,624
Total	238,916	132,569	131,457

THE SPIES PETROLEUM COMPANY, LIMITED.

ANNUAL REPORT.

A report of the directors of the Spies Petroleum Co. covering the operations of the company for the past half of the present year was issued yesterday. It stated that the gross production of crude oil during the six months, January 14th to July 13th (n.s.) (16 days' stoppage due to strike), amounted to 3,007,540 poods, or an average daily output of 18,227 poods. The production since July 13th (n.s.) has shewn a considerable improvement over that of the first half of this year, the total for the period to October 28th, 1906 (n.s.) (during which work was further suspended for 15 days owing to strike), being 1,961,035 poods, or an average daily output of 21,315 poods, as against the daily average of 18,227 poods for the first half of the current year.

The crude oil sold and delivered during the six months under review amounted to 2,478,556 poods, realising Rs. 528,565.24 an average selling price of 21.32 copecs per pood.

NEW COMPANIES.

ANGLO-CANADIAN PETROLEUM COMPANY.

October 24th. £50,000 (£1). To search for, prospect, win, get, raise, export, import, manufacture, sell and deal in oil and its products, and to carry on the business of refiners of and dealers in petroleum and other oils; wharfingers, shippers, carriers, shipowners, etc. The signatories are:—

	Shares.
W. Eacott, 29, Powell Road, Clapton, N.E.	1
H. Gibson, 8, Great St. Helens, E.C.	1
S. Jordan, 115, Elm Park Mansions, S.W.	1
T. J. Bowles, 118, South Esk Road, Forest Gate	1
T. J. Jidgen, Sefton Cottage, Forty Hill, Enfield	1
A. W. N. Stuart, 9, Barnsbury Park, N.	1
R. Boot, 36, Southcote Road, Woodside, South Norwood ..	1

No initial public issue. First directors (not less than three nor more than five) to be appointed by signatories. 100 shares. £150 each per annum (Chairman £200). 39, Lombard Street, E.C. (90,537).

TURPENE, LIMITED.

This company has recently been registered to adopt an agreement between Dr. Paul Dvorkovitz and Mr. D. A. Sutherland and carry on business as manufacturing chemists, and refiners, and manufacturers of turpentine and turpentine substitutes. Dr. Dvorkovitz is the manager, and also one of the directors of the company.

TRINIDAD PETROLEUM COMPANY.

October 19th, with a capital of £30,000, divided into 30,000 shares of £1 each. As title. No initial public issue. First directors (not less than four nor more than six) to be appointed by signatories. Qualification, £500. Remuneration as fixed by company.

BRITISH NON-EXPLOSIVE TANK COMPANY.

October 31. £7,500 (1s.) Tank makers, founders, &c. No initial public issue. First directors (not less than two nor more than seven) not named. Qualification, 2 shares. Secretary: F. Hamilton, 11, Sise Lane, E.C.

LUBRICATING AND FUEL OILS, LTD.

Registered on November 3, with a capital of £100,000 to adopt six agreements with parties not named, to import, manufacture, store, refine, export, and deal in oils.

Change of Address.—The Secretary of the Anglo-Russian Petroleum Co., Ltd., writes to inform us that the registered offices of the company have been removed from Salisbury House to 36-37, King Street, Cheapside, London, E.C., to which place all communications should in future be addressed.

THE OIL AND COAL INDUSTRIES OF THE UNITED STATES.

Will the American Petroleum Industry Develop into a Liquid Fuel Proposition at Home?

With the continued enormous development of both the oil and coal deposits throughout the United States, and the consequent collection of large stocks above ground of the former, coupled with the fact that following upon this congestion in the production of oil, many wells have been shut down for the present, the question which confronts the intelligent mind is: What is to be the natural outcome?

We are all aware that during the past few years the American petroleum industry, when viewed from the American standpoint, has fast been developing into a liquid fuel proposition. The majority of railways now appreciate the use of liquid fuel, and, what is more, have adapted their engines to burn it, while the United States navy has declared its voice most strongly in favour of oil as compared with coal for power raising purposes. Added to this many large industrial concerns have gone over from coal to the new fuel, a fact which suggests that the petroleum industry of America is, like that of Russia in the days gone by, developing along lines which make it for the most part a liquid fuel proposition.

Yet apart from this great development in the use of oil for power purposes in America, we to-day see an enormous accumulation of stocks in the various producing fields—in other words, there is a glut of production which has rendered it absolutely essential that development in the way of production shall be curtailed and some new opening made for the consumption of oil.

In order that our readers may be better able to judge the increase of production of oil in America during the past few years, we give in the following table the total production of the various recognised fields from the commencement of the present century. It has been as under (in tons):—

	1901	1902.	1903.	1904.	1905.
Appalachian	5,603,028	5,336,464	5,259,708	5,234,911	4,824,493
Lima-Indiana					
and Illinois	3,655,604	3,893,137	4,013,377	4,114,864	3,745,875
Mid-					
Continent	31,525	61,474	178,520	936,254	2,002,249
Gulf.. ..	732,276	3,105,375	3,145,557	4,200,061	6,174,434
California ..	1,464,388	2,330,711	4,063,745	4,941,572	5,571,247
Other	78,042	67,318	82,647	85,979	64,632
	11,564,863	14,794,479	16,743,554	19,513,641	22,452,930

In the above table, it is significant to note that the regions producing heavy grades of oil are becoming most prominent in regard to production, while the light oil producing regions are steadily declining. For instance, we find that in the Appalachian field, the oil of which is sold under the head of Pennsylvanian oil, while at the commencement of the century it was yielding over 57 per cent. of the total production of the States, it has gradually declined in its percentage of yield—a remark which also applies to the Lima-Indiana field. On the other hand, however, the fields supplying heavier oil such as California and Texas, are year by year contributing larger quantities of oil, these last year producing over sixty per cent. of the total yield, whereas

five years ago their combined production was only about eight per cent. Thus here we see the trend of events—the American petroleum industry is steadily moving to a liquid fuel proposition.

It is here very interesting to note the remarks by Mr. W. T. Griswold, of the United States Geological Survey, whose report upon the production of American petroleum during 1905 is just to hand. In this Mr. Griswold states that the production of liquid fuel in the States for that year reached 70,500,000 barrels (11,800,000 tons), this being from the Californian and Gulf fields. Proceeding he says, "Oil of this heavier quality has its principal use in fuel, and it is in the demand for this purpose which must be looked to for the consumption of heavy oils. The growth of this demand is bound to take time, for not only must the consumer be persuaded that it is cheaper and more desirable at the present price, but that the future supply will remain sufficient to keep the price below that of other fuels. The present price of Texas and Californian petroleum is no determination of its value. For a period of five years the quantity of production has increased each year much faster than the commercial world could adjust itself to the use of the new fuel. That this great increase in production each year can go on indefinitely is improbable, and as the steady increase in the consumption of oil is an assured fact, this condition will shortly bring about an adjustment between production and consumption. It is well established that a barrel of petroleum is equivalent in heat-producing effect to between one-fourth and one-third of a ton of coal: hence the value of liquid fuel must finally adjust itself to the cost of one-fourth or one-third of coal at the point of consumption."

This is exactly the crux of the whole matter, and in the last sentence of Mr. Griswold's remarks lies the future of oil fuel in America as a competitive to coal. Mr. Griswold, however, might have carried his argument a little further, and said that so long as the cost of liquid fuel at the centre of consumption works out at a figure below that of coal, then of course will its extended future use be assured. If, on the other hand, it is found that the cost of oil exceeds the cost of that quantity of coal necessary to give the same heat, then whatever advantages oil fuel may have in regard to cleanliness of handling and economy in storage will count as nought.

Thus, if we must arrive at a definite conclusion as to the future of American oil as an important factor at home in displacing coal, we must of necessity consider the question of the American coal industry, and look into one or two matters associated with it, and yet closely allied to the main point to be considered.

Let us then consider the extent of the coal regions of the United States, and in this regard we will, for the sake of convenience, divide them into two divisions,

anthracite and bituminous. The areas in which anthracite coal is produced are confined almost exclusively to the eastern part of Pennsylvania, this region covering an area of about 484 square miles. In addition, however, to this well-known area, there are two small districts in the Rocky Mountains where anthracite coal has been located, but the production here is inconsiderable.

The bituminous coal fields are, on the other hand, scattered over wide areas of the United States, and altogether include something over 335,000 square miles, and last year's total production of both bituminous and anthracite coal was 390,900,000 tons. The most important of these regions from a productive standpoint is the Appalachian system, including the areas contained in Western Pennsylvania, and in Ohio, Virginia, West Virginia, Tennessee, and Kentucky. This region contains an area of over 70,000 square miles underlain by coal, and last year it produced over 67 per cent of the total bituminous output in the United States. The next field in importance is the Central field, which contains 58,000 square miles, and last year produced 55,000,000 tons of coal, while the Western field, which comes third in importance, includes 94,000 square miles of territory, and last year produced over 23,000,000 tons of coal. In point of size, however, the Rocky Mountain region is the largest, this having over 100,000 square miles of area, the production of last year being 19,000,000 tons.

It was in 1853 that the total production from the coal fields of the United States ran into the tens of millions of tons, the major portion of this being obtained from the anthracite fields of Pennsylvania. From that time the coal industry of America has made remarkable progress, as will be seen from the fact that, since records have been kept, no less than 6,000,000,000 tons have been mined in the various States, considerably over one half of this having been obtained from the Pennsylvanian fields. We have not the space at our disposal here to give a large number of details concerning the production of the various fields, and how it has, during the last half century, made the progress which has been characteristic of the American coal industry; but we can say that, with very few exceptions, this progress is reflected in each of the various States. An interesting fact which may be here mentioned, however, is that in each decade the coal production of the United States has practically doubled. Based upon the then population of the United States, the coal production of 1870 shewed a per capita average of 0.857 tons, but 10 years later the figures shewed 1.43 tons per capita. Coming down to the last year, we find that the per capita production was as much as 4.73 tons, so that, while the population of America has for the past half century increased 230 per cent., the production of coal has increased 4,084 per cent.

Now let us turn to another important factor to be recollected. The coal export trade of the States is almost insignificant, in fact it can be taken for the sake of argument that practically the entire output of both anthracite and bituminous coal of the United States is

consumed within the country. It will be apparent, therefore, that the coal industry of America is essentially of a home nature—it has to satisfy the home demand and little or nothing more, and so while the oil industry for the most part looks abroad for markets, the coal trade of the States is limited to the States themselves, and almost the whole of the coal produced is consumed in the States.

It is always a matter of difficulty to dive into prices, yet as it is upon this that the future of any developments of the American liquid fuel trade at home depends, it is well to carefully consider the average price of coal in a number of the oil producing regions for the past five years. The prices here given are those for coal at the pit mouth, just the same as we quote the price for oil at the wells. For the past five years the coal prices in the undermentioned producing fields have been (in dollars per ton):—

	1901	1902	1903	1904	1905
California ..	2.65	3.14	2.86	4.74	4.97
Illinois ..	1.03	1.03	1.17	1.10	1.06
Indiana ..	1.01	1.10	1.23	1.11	1.05
Indiana Territory	1.62	1.52	1.82	1.82	1.76
Kansas ..	1.22	1.30	1.32	1.51	1.46
Ohio ..	1.00	1.14	1.29	1.09	1.04
Texas ..	1.72	1.64	1.62	1.66	1.64
Pennsylvania ..	.99	1.08	1.18	.96	.96
(Bituminous)					

In the principal American fields yielding principally a fuel oil during the above periods, the average prices of oil at the wells have been as under (per barrel):—

	1901	1902	1903	1904	1905
California ..	.40	.35	.30	.27	.24
Indiana ..	.83	.87	1.14	1.08	.85
Kansas ..	.86	.83	.73	.55	.50
Ohio ..	1.08	1.05	1.21	1.25	1.04
Texas ..	.28	.22	.41	.36	.26

The above tables when analysed sum up the situation and the prospect for the development of an extensive oil fuel industry in America. Taking California first, it will be noticed that in that state liquid fuel offers the great advantage of price over its older competitor coal, and therefore it is no surprising matter to find that in California a liquid fuel industry is being rapidly developed. In spite of what are looked upon as somewhat heavy intermediate charges (including those of transport) the crude oil can be purchased at San Francisco at a rate which enables it to compete easily with coal. There at all events liquid fuel has a very wide field for application. The steamers plying in and out of the ports on the Californian coast have long ago grown used to burning oil under the boilers, while the railroads have gone completely over to oil in preference to coal.

In Texas, too, liquid fuel promises a very great application in the future for, as will be seen from the cost of coal at the Texas wells, the economy of oil fuel is apparent. This remark applies to a few other producing districts in America where the product is for the most part of a heavy nature and unsuitable except as fuel. But leaving out California and Texas from the question, it is self evident that the chances for the success of a home oil fuel industry in the States are very remote.

In the Mid-Continent fields we are aware that the creation of a fuel oil industry is looked forward to by the producers, but in the face of the figures given above, we are afraid the crude oil would have to experience a few sharp drops even on its present price, before this end could be achieved.

The Liquid Fuel Conference at St. Petersburg.

IMPORTANT DISCUSSIONS.

On October 29th the important conference opened at St. Petersburg under the presidency of the Minister of Commerce and Industry (Mr. D. A. Filosofov), to consider means for assuring to Russian consumers a supply of oil and coal fuel.

The representatives of the War Ministry, Home Ministry, Ministry of Communications, Ministry of Finance, Ministry of Commerce and Industry, the Board of Agriculture, and the State Control participated in the Conference, while the following institutions were also represented:—Baku Petroleum Association, Kharkoff Mineowners' Association, Grosny Petroleum Association, Mineowners' Association of Poland, Consultative Bureau of Iron Manufacturers, Association of Representatives of Industry and Commerce, Kharkoff Committee for the Transportation of Mineral Goods, Saratoff, Nijni-Novgorod, Rybinsk and Astrakhan sections of the Imperial Russian Society of Navigation, and of the Exchange Committees of Moscow, Astrakhan, Baku, Warsaw, Kazan, Nijni-Novgorod, Rybinsk, Samara and Saratoff. The Committee of Trade and Manufacturers of Ivanovo-Voznessensk, the St. Petersburg Manufacturers' Association, Association of Metal Manufacturers of the Northern and Baltic Provinces, the Kavkaz and Merkuri Steamship Co., the Association of Houseowners of Moscow and the Central Tcheleken Petroleum Co.

The following were the questions down for consideration by the Conference:—(1) To make clear the present position of the question of the supply of fuel for industries; (2) is it necessary, by means of adjusting import duties and railway rates, to temporarily facilitate the import of foreign oil into Russia; (3) the delivery of crude oil and residuals from Baku by rail during the winter; (4) shall the Government take the royalties due to them in kind; (5) *re* petroleum storage installations; (6) the export of kerosene; (7) the establishment of workmen's villages at the Baku oil fields; (8) measures to place the labour question at Baku as a proper basis.

The President, in his opening speech, explained to the conference the history of the questions to be considered, and enumerated those temporary measures which it was necessary to immediately adopt in order to avert the scarcity of fuel which threatens Russian industries. In addition to the questions mentioned in the programme the Minister outlined a number of others which were not the outcome of the present abnormal condition of the country, but nevertheless the solution of the same would greatly facilitate the development of its productive capacity. In speaking of the labour question the Minister announced that he had found it necessary to invite representatives of the oil field workmen to the conference.

Detailed reports submitted by the representatives of the Baku producers shewed that the disturbance of the equilibrium between demand and supply of liquid fuel had been caused by those temporary and

abnormal conditions through which the Russian petroleum industry had lately been passing. The failure of crops in those provinces through which the oil traffic had to pass also aggravated the difficulty. The transport to those provinces of millions of poods of grain congested the railways and hampered the timely delivery of the petroleum tank waggons to their destinations. If, with the aid of the Government, it were found possible to bring about a permanent settlement of the labour question at the oil fields, and to regulate the question of transport, the petroleum industry would recover quickly, and the producers would carry out their contract obligations, while the consumers would be assured of the quantities of liquid fuel required by them. The adoption of extraordinary, almost heroic measures, such as the opening of the frontiers to foreign coal, would be scarcely necessary.

The representatives of the manufacturing industries of Central Russia found it impossible to agree with the statements of the Baku producers. They, in the persons of J. P. Goujon and V. N. Semenvitch, had no faith in the promises of the petroleum producers to create sufficient stocks by the time of reopening of navigation, and pointed to the high prices of crude oil in Moscow, against which they are powerless to fight, as it was impossible for them to replace petroleum residuals by any other kind of fuel. In their opinion, no matter what stocks the petroleum producers would accumulate, the prices inflated not so much by unforeseen circumstances as by the producers themselves, would remain abnormally high and unbearable for the manufacturing industries. The Government must come to their aid, and by facilitating the admission of foreign coal to Moscow and St. Petersburg create a normal competition to petroleum.

The attack of the Moscow manufacturers called forth a vigorous reply from the petroleum producers. Mr. A. O. Gukasoff, Member of the Council of State, basing himself on statistical data, proved the injustice of the accusations made against the petroleum producers. In 1895 a bitter fight began between the suppliers of liquid fuel and coal, and it is in this struggle that the Baku petroleum industry flourished. Without any artificial measures, without Government assistance, it occupied a firm position, and would have held it to the present time but for an unfortunate combination of circumstances. The nature of those circumstances were well known to the members of the conference, and the recollection of the destruction of the oil fields was still fresh in their minds. That the petroleum producers did not endeavour to draw any advantage from the perfectly normal rise in price was proved by the fact that they were the first to raise before the Government and the country the question of replacing liquid fuel by coal. At their request a conference was called for this purpose under the presidency of Mr. Timiriaseff, and subsequently another under the presidency of the Minister of Finance, Mr. B. N. Kokovtzeff. These

conferences should have convinced everybody that it was not a strike of producers, but that the rise in price was brought about by circumstances over which they had no control. This was proved more clearly still by the investigation of Senator Kuzminsky. At the last conference measures were outlined which should have given steadiness to the petroleum industry. Unfortunately, those measures had not yet been realised. The project of the Baku town governorship had passed the Council of State in a considerably modified form, some of the rights which the petroleum producers had specially asked for had been taken out, and, without these, peace at the oil fields would not be restored. Although the position at Baku, Mr. Gukasoff declared, was influenced by the general disturbed condition of Russia, if the producers were only given the possibility of organising the workmen, and allowed to have one month of peaceful normal working, the production would rise again to 40,000,000 poods, and they would satisfy the requirements of the country in liquid fuel.

The further discussion, in which apart from the persons mentioned above participated—Messrs. M. I. Lazareff, A. M. Konshin and E. L. Nobel—led to no positive results, and the question of the condition of the petroleum industry was left to be further discussed at the second sitting on October 31st.

The second sitting on October 31st opened with a speech by Mr. A. T. Drey, representative of the Ministry of Communications, who in view of the reduced output of crude oil at the Baku oil fields urged the necessity of actively developing oil fields in other parts of Russia, where more or less prolific deposits of liquid fuel had already been discovered, as for instance in Central Asia, in the Ferghana Province. To this the President replied that the question of new oil fields has for a long time been receiving the attention of the Government. The President had shortly before the calling of this conference commissioned M. Tchernisheff, member of the Academy of Science, to consider and report on this question from the scientific point of view. M. Tchernisheff's report is ready, and will be submitted to the Conference.

The representative of the Rybinsk Exchange Committee in a speech touched upon what, in his opinion, are the main causes of the difficult position of the petroleum industry in particular, and all Russian industries in general. The Rybinsk Exchange Committee, before electing a representative for the conference, have carefully considered all the questions in the programme, and given their representative clear instructions. The attacks of the manufacturers of the central provinces on the Baku producers were unjustified. Producers cannot be blamed for selling their products at a certain profit. No commercial enterprise can be carried on on charitable principles. The evil is not there where the preceding speakers had seen it. In fact, the stocks of fuel oil are not large. The Volga shipping industry is feeling the need of it more keenly than any other branch of industry. For it the substitution of other fuels for petroleum is absolutely impossible. More than 80 per cent. of the steamers are fitted for burning liquid fuel, and the

changing to other fuel is beyond the means of the shipowners. It is therefore necessary that the stocks of liquid now on the Volga shall be drawn upon only for the needs of the shipping industry, whilst the needs of the manufacturers of the central provinces shall be satisfied by the supply of coal and other fuels. It is an unfortunate fact that the railways are concentrating their efforts, not on the extension of their systems and increasing their carrying capacity, but on a relentless competition with the waterways by cutting their rates.

Mr. N. S. Avdakoff directed the discussion into a quite fresh channel. All the arguments for and against the successful emerging of the petroleum industry out of its present difficult position, he said, are based on insufficiently solid grounds. It has not been determined whether the petroleum industry has in itself any firm foundation, and it is necessary to ascertain the extent of the technical equipment of the oil fields, the natural stores of oil in the Baku oil fields and its productive capacity. In his opinion these questions had not been sufficiently cleared up by the former conferences presided over by Mr. Kovalevsky, Timiriaseff and Mr. Kokovtzeff respectively, and this is the reason why these conferences have yielded so little in the way of practical results, in spite of the efforts applied by their enlightened presidents. Mr. Avdakoff further expressed the wish that the competent answer to those questions shall come not only from the representatives of the petroleum industry, but also from representatives of the mining department.

Mr. P. O. Gukasoff replied in a long speech, in which, with the aid of exact figures, he sketched out clearly the natural resources of the Apscheron Peninsula. This speech was listened to with great attention, and created a firm basis for further discussion. Mr. Gukasoff explained that the technical equipment of the Baku oil fields allows to calculate on a production of not less than 700,000,000 poods of crude oil per annum. In 1900, when all the oil field installations were not in exploitation or even in existence, the production of crude oil amounted to 675,000,000 poods. Now this quantity would have been increased by many tens of million poods. The petroliferous area is far from being completely utilised. The former Ramany Lake has provided the industry with 486 acres of most prolific land. Of these 81 acres had already been leased out by auction, whilst 40½ acres more will be leased out shortly. There are consequently still left 364½ acres for future development. Bebe-Aibat Bay, notwithstanding the onerous terms of lease imposed, are attracting annually numbers of new capitalists, and then at Saboontchi and Ramany there are still 302½ acres of virgin land.

The fear of the exhaustion of places suitable for exploitation is quite groundless. The reserve of undeveloped land alone would last for many years. In 1895 there were in exploitation 1,468 acres; by 1904 this area had increased to 2,643 acres. On this area, since the creation of the oil fields, there has been produced more than 6,000,000,000 poods of oil, and if work had throughout continued in full swing, without any disturbances and forced stoppages, the wells already drilled would have yielded more than 10,000,000,000

poods. Many of these wells had, for some reason or other unconnected with the natural resources of the ground, remained inactive. In 1902 the number of such inactive wells was 1,189. Owing to last year's events their number had more than doubled. If in the future those wells were again exploited, there could be no doubt of the success of the production, apart from the plots now in exploitation were far from being equipped in a sufficient manner. The oldest field, Balakhany, is exploited on the average by 3.4 wells per dessatine (2.7 acres); at Bebe-Aibat there are only two wells per dessatine, and only at Ramany the average rises to 5.6 per dessatine. In leases under normal conditions the obligatory number of wells is generally put down at 10 per dessatine, and it would therefore hardly be excessive to base future calculations on an average of 5.5 wells per dessatine. Those calculations shewed that there was every reason to believe that there was enough oil to last for many decades, and there was no need to resort to artificial measures or look for new oil fields.

Mr. Gukasoff then proceeded to deal with the question of the fixing of prices for oil. The producers themselves did not consider the present prices as normal, but the question was what was a normal price? The petroleum industry was attended with more risk than any other branch of trade. As an illustration, Mr. Gukasoff mentioned the average figures obtained by a typical petroleum firm. The cost of the crude oil to that firm was made up of various items such as working expenses, amortisation of surface plant and cost of drilling, management, etc. The firm in question did not resort to credit, but operated with its own capital. Cost of labour, which since last year had almost doubled, in normal times amounted to 3 copecs per pood; the cost of materials required in exploitation worked out at 2 copecs per pood. Amortisation of surface plant represents 1 copec, and drilling cost 3.25 copecs per pood. That last item was taken not from the results of the particular firm, but on the basis of official statistics, which put the cost of drilling one sagene (7 feet) at 300 roubles, by taking all the wells drilled during the period 1898—1904, and the quantity of oil produced from the wells during the same period; management, rates, taxes, contribution to common fund, etc., amount to 0.75 copecs per pood, thus the cost of a pood of oil to the producer on the spot was 10 copecs. To that had to be added the cost of fuel consumed at the oil fields, which represented 12 per cent of the oil produced and rent of the land; that last item was a heavy one. For future development the producers had to depend on Government land only, on which heavy heavy royalties had to be paid. Whilst in 1896 Government land, worked on a royalty basis, contributed less than $\frac{1}{2}$ per cent. of the total production, in 1904 their share represented 45 per cent. That increase was certain to continue, as the private lands were getting exhausted and were replaced exclusively by Government lands. The average royalty paid on Government lands now in exploitation was 40 copecs. The auctions which were to take place on November 1/14th were certain to send that average up considerably. At a royalty of 40 per cent. the cost of crude oil to the pro-

ducers was 17.5 copecs per pood, at 45 per cent it was 22 copecs, and at 60 per cent. it was 27 copecs.

Mr. Gukasoff was certain that at the forthcoming auctions the royalties offered would by far exceed the figures just mentioned. Under such conditions, let the consumers say what prices they could offer to the producers, which would leave to the latter some profit. The Government had also to decide whether the system adopted by them for leasing out lands was the right and proper one.

Mr. Gukasoff's views were supported by Mr. M. K. Pappe, who even suggested the cancelling the auctions fixed for the 1/14th November. This the President declared to be impossible.

After some remarks by Mr. I. Lazareff to the effect that the Moscow consumers themselves had taken into account the practical certainty of an increased production in concluding their contracts,

Mr. A. O. Ivanoff, assistant director of the Mining Department, gave some explanations concerning the possible stores of oil in the Apscheron Peninsula. An accurate scientific determination of the possible store of oil he said was impossible. There were no geological maps, and no thorough investigation had been carried out. Attempts to calculate the reserves of oil had been made by Mr. Sokolovsky, but his calculations were incorrect. At a later period another calculation was made by Mr. Konshin, but his conclusions were also disproved by facts.

The latter calculation shewed that the Apscheron Peninsula could yield 12,000,000,000 poods of crude oil, of which seven have already been extracted, so that there was still left in the ground 5,000,000,000 poods. However, certain parts of the oil fields, in which, according to Mr. Konshin's calculation, the whole store of oil should have by this time been exhausted, still shewed no signs of exhaustion. Thus there was as yet no scientific method for determining the reserve of oil. As regards the rather problematical prediction made on the strength of statistical data, the statements made by the petroleum producers were from this point of view likely to prove correct. Although, in the petroleum industry calculation by averages frequently prove misleading, and the expected production of crude oil was not always realised, there were, however, as yet no visible signs of the exhaustion of the oil fields. If work would go on in a normal way, and there were no strikes, the Baku petroleum industry was bound to get on its legs again.

Mr. Litvinoff-Falinsky, Director of the Department of Industry, warned the conference against being carried away by the figures. He pointed to the probability of the recurrence of strikes, and suggested that in all calculations an allowance of 20 per cent. should be made as loss of production through strikes.

M. Djunkovsky, representative of the Viceroy of the Caucasus, whilst correcting some of the statements of the producers, agreed with them that the production was bound to increase in the future. Part of the land suitable for exploitation was occupied by workmen's dwellings. The land would be available for production as soon as the question of workmen's villages had been solved. There was also to be expected a decreased consumption of oil as fuel at the oil fields with the extension of the utilisation of natural gas for that purpose.

In view of the great importance attached by the Conference to the figures submitted by the producers a committee was nominated to verify the same.

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR SEPTEMBER.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during September were as under:—

		1905. Quantities. Gallons.	1906. Quantities. Gallons.
CRUDE—			
Baltimore	.. ..	—	—
Boston and Charlestown	.. ..	—	—
Delaware	.. ..	8,623,729	—
New York	.. ..	—	2,701
Philadelphia	.. ..	1,733,479	4,746,909
Galveston	.. ..	1,647,545	—
Total	.. ..	12,004,753	4,749,610
Total value for the month, 1905..	.. ..	.. ..	\$623,375
" " " 1906..	.. ..	.. ..	\$274,589
NAPHTHAS—			
Baltimore	.. ..	—	—
Boston and Charlestown	.. ..	—	—
Delaware	.. ..	—	—
New York	.. ..	1,265,931	467,781
Philadelphia	.. ..	2,746,626	409,000
Galveston	.. ..	—	—
Total	.. ..	4,012,557	876,781
Total value for the month, 1905 ..	.. ..	.. ..	\$269,668
" " " 1905 ..	.. ..	.. ..	\$91,205
ILLUMINATING—			
Baltimore	.. ..	4,281,743	3,282
Boston and Charlestown	.. ..	11,434	5,158
Delaware	.. ..	43,637	—
New York	.. ..	42,662,111	45,411,787
Philadelphia	.. ..	34,137,134	29,998,656
Galveston	.. ..	1,175,926	972,486
Total	.. ..	82,311,985	76,391,369
Total value for the month, 1905 ..	.. ..	.. ..	\$4,900,508
" " " 1906 ..	.. ..	.. ..	\$4,701,409
LUBRICATING—			
Baltimore	.. ..	283,342	475,477
Boston and Charlestown	.. ..	6,123	15,144
Delaware	.. ..	—	—
New York	.. ..	7,719,853	6,812,735
Philadelphia	.. ..	2,932,207	5,230,815
Galveston	.. ..	846,913	673,141
Total	.. ..	11,788,448	13,207,312
Total value for the month, 1905 ..	.. ..	.. ..	\$1,434,661
" " " 1906 ..	.. ..	.. ..	\$1,490,483
RESIDUUM—			
Baltimore	.. ..	—	—
Boston and Charlestown	.. ..	—	—
Delaware	.. ..	—	—
New York	.. ..	—	370,037
Philadelphia	.. ..	5,152,187	1,627,247
Galveston	.. ..	957,436	906,951
Total	.. ..	6,109,623	2,904,235
Total value for the month, 1905 ..	.. ..	.. ..	\$169,250
" " " 1906 ..	.. ..	.. ..	\$94,426
TOTAL MINERAL OILS—			
Baltimore	.. ..	4,565,085	478,759
Boston and Charlestown	.. ..	17,557	20,302
Delaware	.. ..	8,667,366	—
New York	.. ..	51,647,905	53,065,041
Philadelphia	.. ..	46,701,633	42,012,627
Galveston	.. ..	4,627,820	2,552,578
Total	.. ..	116,277,366	98,129,307
Total value for the month, 1905 ..	.. ..	.. ..	\$7,397,468
" " " 1906 ..	.. ..	.. ..	\$6,652,112

YOKOHAMA PETROLEUM IMPORTS.

The total value of the kerosene imports into Yokohama during August amounted to 1,579,555 gallons and were valued at 331,706 yen as compared with an importation of 3,001,264 gallons during the corresponding period of last year, reaching a value of 647,253 yen. The total quantity of petroleum imported into Yokohama since the commencement of the year has reached 10,820,131 gallons.

AMERICAN NOTES

Barrels for Petroleum.—According to a report of the Department of Agriculture of the United States, there were 1,107,606 barrels manufactured in America during 1905 exclusively for use in the petroleum trade.

Canadian Oil Pioneer Dead.—The death is announced of Captain Wallen, one of Canada's most popular oil pioneers. Captain Wallen was connected with the oil business for over 40 years, and for the past 26 years has been a prominent producer in Oil Springs.

A New Gas Company.—A new gas company has been formed under the title of the Oklahoma Gas Co. with a capital of \$3,000,000. The objects of the company are to furnish Oklahoma City with natural gas, in addition to supplying a number of towns in the locality.

To Handle Crude in Bulk.—The schooner "Thomas W. Lawson," which has lately been leased to the Sun Oil Co. for the handling of crude in bulk in the Gulf Coast, enjoys the distinction of being the only seven-masted schooner, as well as the largest fore and aft, vessel afloat.

In the Sour Lake District.—According to the *Oil Investors' Journal*, a record of operations in the Sour Lake field up to the end of September shewed that no less than 316 wells had been abandoned, this being at the rate of eight per month since the time the field came in—April 1903.

Large Air Compressors for Jennings.—The air compressors which are being installed for the large plant of the Jennings-Heywood Syndicate have been found to be so heavy that it has been necessary to take them in pieces so that they can be transported. The weight was too much for the railway bridges near the oil fields.

The Coalinga Oil Field.—The production in the Coalinga oil field is now about 13,000 barrels daily. Slightly over 200 wells are producing, while for the present 100 are shut down. During September the total production, according to the *Pacific Oil Reporter* was close upon 400,000 barrels, the rail shipments for that period being 370,000 barrels.

The Illinois Oil Field.—The latest developments in the Illinois oil field have resulted in its being somewhat extended. The direction is to the east of the hamlet of Oblong along the Illinois Central Railroad, this spot being now the centre of the oil activity. At this point, which is in Oblong Township in Crawford county, wells of 500 barrels capacity are the rule.

To Reclaim Bad Oil.—The *Oil Investors' Journal* gives details of the plant which has recently been erected by the A. J. Libby Oil Co. in the Jennings field for the purpose of reclaiming bad oil. The Jennings field produces a large quantity of oil which, unless specially treated, is a total loss to the producers; and the new plant is proposed to put an end to these repeated losses by turning the oil to good account.

Pump Station Completed. The new pumping station of the Prairie Oil and Gas Co. on Polecat Creek, a few miles east of Jenks, is now operating the new eight-inch line, which finds an outlet for the Glenn pool production toward Texas. Henceforth a much larger quantity of oil will be handled by the Prairie Co. from this pool, while other improvements now under way will enable the company to take care of the majority of the production.

From Roumania.—Mr. H. P. Rickard, who is the pipe line superintendent for the Standard Oil Co. in Roumania, has recently written to America giving impressions of the Roumanian fields. He says he predicts great things in the way of crude oil production in Roumania, and the territory will in time surpass that of many of the American fields in point of area. He points out that there are many Americans working in the Roumanian petroleum business.

Missing.—Inasmuch as no news has been received of the Standard Oil Co.'s barge No. 90, it is believed that the craft has gone down as a result of being struck by a hurricane while in the Gulf of Mexico. The tank steamer "A. F. Lucas," also owned by the Standard, has been endeavouring to locate the missing barge, but without success, though for a distance of nearly 150 miles a trail of oil was encountered. The missing barge had a capacity for 26,000 barrels, and left Port Arthur on September 21st with 11,000 barrels of solar oil and 13,000 of crude.

The Petroleums of North America.

By Mr. CLIFFORD RICHARDSON.

Being a Comprehensive Account of the Constituents of American Petroleum.

Continued from page 240.

The ultimate composition of the crude oil and of a residuum obtained by spontaneous evaporation of the oil in a current of air he found to be:—

	Crude.	Residue.
Specific gravity	830	862
Symbol	C_nH_{2n}	C_nH_{2n-2}
Carbon	85.51%	86.16%
Hydrogen.. ..	14.18	13.69

From the preceding data it is apparent that the petroleums of the Appalachian field contain a high percentage of constituents which are volatile or distil at a comparatively low temperature, and which are of a low density and suitable for the preparation of naphtha and illuminating oils.

A determination of the ultimate composition of these oils shew that they consist essentially of 85.5 to 86 per cent. of carbon, 14.2 to 13.5 per cent. of hydrogen, and a few hundredths of one per cent. of sulphur and nitrogen.

The distillates of the crude petroleum have been examined with great care by Young, Mabery and others, with to the determination of their proximate composition. Mabery has found that the hydrocarbons of the C_nH_{2n+2} series are present, with a few exceptions, from butane, boiling at—10 degrees, to one of the formulae $C_{35}H_{72}$, and that probably other solid paraffins of higher molecular weight are present, the formulae of which it is impossible to determine with our present methods. He also finds liquid saturated hydrocarbons of the C_nH_{2n} series, from $C_{21}H_{42}$ to $C_{26}H_{52}$, and others of possibly higher molecular weight, while he has separated liquid saturated hydrocarbons of the C_nH_{2n-2} series containing 27 and 28 atoms of carbon.

Young has isolated from the lighter distillates of Pennsylvania petroleum in a very considerable degree of purity, the naphthenes or monocyclic polymethylene hydrocarbons C_nH_{2n} , containing five, six, and seven atoms of carbon, pentamethylene, methylpentamethylene, hexamethylene, dimethylpentamethylene and methylhexamethylene, corresponding to those found in Russian petroleum.

Both of the preceding investigators have found considerable amounts of aromatic hydrocarbons. Young finds benzol in the fraction boiling at about 65 degrees and 66 degrees, and toluol to a considerable extent in a higher fraction, while other homologues have been detected by Mabery.

While unsaturated hydrocarbons are present in Pennsylvania petroleum, and are readily removed by strong sulphuric acid, there is, in the opinion of all modern investigators, no sufficient evidence that these hydrocarbons are members of the olefine series. Their actual structure has not yet been determined.

Sulphur and hydrogen derivatives of the hydrocarbons are present in but mere traces.

The following table gives the characteristics of the various saturated hydrocarbons of the C_nH_{2n+2} , C_nH_{2n} and C_nH_{2n-2} series, as described by Mabery and Young:—

C_nH_{2n+2} Hydrocarbons.				
Composition.	Specific gravity.	Ref. index.	Boiling point.	Pressure.
C_4H_{10} Iso.	—	—	0°	760mm.
C_5H_{12} Nor.	.6250 25/25°	—	36.3	760mm.
	.6261 0/4°	—	—	—
	.6454 0/4°	—	—	—
C_5H_{12} Iso.	.6392 0/4°	—	27.95	711mm.
C_6H_{14} Nor.	.6771 0/4°	—	68.95	711mm.
C_6H_{14} Iso.	.6730 0/4°	—	61.00	711mm.
C_7H_{16} Nor.	—	—	98.40	711mm.
C_7H_{16} Iso.	.6959 0/4°	—	90.30	711mm.
C_8H_{18} Nor.	.7188 20/20°	—	125.00	760mm.
C_8H_{18} Iso.	.7190 20/20°	—	119.50	760mm.
C_9H_{20} Nor.	—	—	151.00	760mm.
$C_{10}H_{22}$ Nor.	.7479 20/20°	—	163-164	760mm.

C_nH_{2n+2} Hydrocarbons.				
Composition.	Specific gravity.	Ref. index.	Boiling point.	Pressure.
$C_{10}H_{22}$ Iso.	.7467 20/20°	—	173 174	760mm.
$C_{11}H_{24}$	.7581 20/20°	—	196 197	760mm.
$C_{12}H_{26}$ Nor.	.7676 20/ 0°	—	214-216	760mm.
$C_{13}H_{28}$..	.7834 20/20°	1.451	226	760mm.
$C_{14}H_{30}$..	.7814 20/20°	1.436	236-238	760mm.
$C_{15}H_{32}$..	.7896 20/20°	1.4413	256-257	760mm.
$C_{16}H_{34}$..	.7911 20/ 0°	1.4413	274-275	760mm.
$C_{17}H_{36}$..	.8000 20/20°	1.4435	288-289	760mm.
$C_{18}H_{38}$..	.8017 20/20°	1.440	300 301	760mm.
$C_{19}H_{40}$..	.8122 20/20°	1.4522	210-212	50mm.
$C_{21}H_{44}$..	—	—	230-231	50mm.
$C_{22}H_{46}$..	.7796 15°	—	240-242	50mm.
$C_{23}H_{48}$..	.7900 60°	—	258-261	50mm.
$C_{24}H_{50}$..	.7902 60°	—	272-274	50mm.
$C_{25}H_{52}$..	.7941 60°	—	280-282	50mm.
$C_{26}H_{54}$..	.7977 60°	—	292-294	50mm.
$C_{28}H_{58}$..	.7945 70°	—	310-312	50mm.
$C_{31}H_{64}$..	.7992 70°	—	328-330	50mm.
$C_{32}H_{66}$..	.8005 75°	—	342-345	50mm.
$C_{34}H_{70}$..	.8009 80°	—	366 368	50mm.
$C_{35}H_{72}$..	.80052 80°	—	380-384	50mm.

Monocyclic Polymethylenes— C_nH_{2n} .

Composition.	Specific gravity.	Boiling point.	Pressure.
C_5H_{10} Pentamethylene ..	.7000 0/4°	50°	760mm.
C_6H_{12} Methylpentamethylene ..	.7660 0/4°	72°	760mm.
C_6H_{12} Hexamethylene ..	.7722 0/4°	80.6	760mm.
C_7H_{14} Dimethylpentamethylene ..	.7543 20/4°	94	750mm.
C_7H_{14} Methylhexamethylene ..	.7964 20/4°	102	760mm.

Hydrocarbons C_nH_{2n}

Composition.	Specific gravity.	Refrac. Index.	Boiling point.	Pressure.
$C_{21}H_{42}$..	.8424 20/20°	—	—	—
$C_{22}H_{44}$..	.8252 20/20°	1.454	240-242°	50mm.
$C_{23}H_{46}$..	.8569 20/20°	1.4714	258-260	50mm.
$C_{24}H_{48}$..	.8598 20/20°	1.4726	272-274	50mm.
$C_{26}H_{52}$..	.8580 20/20°	1.4725	280-282	50mm.

Hydrocarbons C_nH_{2n-2} .

$C_{22}H_{42}$..	.8688 20/20°	1.4722	290-294°	50mm.
$C_{28}H_{54}$..	.8694 20/20°	1.4800	310-312	50mm.

It will be observed in the preceding table that distillates from Pennsylvania petroleum have been obtained corresponding in composition to the presence of carbon atoms from four to thirty-five, with a few exceptions. While the lower distillates may consist of single hydrocarbons, it is impossible to believe that this is the case with the higher ones, owing to the large number of possible isomers. This, however, does not detract from the interest in the results obtained, since they prove that hydrocarbons exist in petroleum of this derivation containing carbon atoms in these numbers combined with hydrogen in the proportions corresponding to the general formulae C_nH_{2n+2} . All the members of this series containing 14 atoms of carbon and above are solid paraffins, melting at from 10 degrees to 60 degrees, and Mabery has shewn that these solid paraffins exist as such in the crude petroleum, and are not formed as the result of decomposition on heating, since he has isolated them from the crude oil without the aid of heat, by evaporation at ordinary temperature in a current of air, a fact which is not unexpected since they are found to separate naturally on the sucker rods of pumps in wells yielding petroleum in which the solid paraffins are present in large amounts.

The lower polymethylenes or naphthenes, C_nH_{2n} , isolated by Young, are plainly monocyclic hydrocarbons. The higher distillates, like those which occur in Russian petroleum, corresponding in composition to the same general formulae, and containing 21 atoms of carbon and over are associated with C_nH_{2n+2} hydrocarbons containing the same number of carbon atoms, or one or two less. They do not solidify at very low temperatures, and are separated from the paraffins by freezing and filtration. From our knowledge of the hydrocarbons in asphaltic oils, it would appear that they differ from them essentially, as they are much more stable, have a

lower density, and, for the same refractive index, nearly double the molecular weight and a much higher boiling point:—

	Paraffin petroleum.	Trinidad asphalt.	California petroleum.	California petroleum.
Density ..	0.8598	0.8690	0.8808	0.8654
Refrac. index. ..	1.4726	1.4721	1.470	1.474
Boiling point ..	272-274°	170-180°	175-180°	178°
Pressure ..	50mm.	30mm.	60mm.	30mm.
Formulae ..	C ₂₄ H ₄₆	C ₁₈ H ₂₄	C ₁₆ H ₃₀	—

With the large number of carbon atoms which these hydrocarbons contain they must be either polycyclic or contain an elaborate side chain. In the former case the hydrogen atoms should be less than twice the number of those of carbon, and in the latter the hydrocarbons should be very unstable. We have no grounds, therefore, for any conclusions as to their structure, but it is evident that they belong to a series quite different in constitution from any that have been previously studied, and that they are not identified with the asphaltic hydrocarbons.

The constitution of the hydrocarbons of 27 and 28 atoms of carbon, corresponding to the formula C_nH_{2n-2}, is equally difficult to explain. As this large number of carbon atoms should correspond to the existence of at least three rings, this would not permit of the presence of hydrogen corresponding to the C_nH_{2n-2} formula. The hydrocarbons of both of these series are saturated, that is to say, are not attacked by strong sulphuric acid, and consequently there is no possibility of the existence of double bonds.

The investigations, the result of which have been outlined, have been confined to those proximate constituents of crude Pennsylvania petroleum which are obtained *in vacuo*. The residues from such distillation are extremely dense substances which cannot be further distilled without cracking, and must therefore be studied in quite a different way.

This has been done by the writer with the aid of solvents, treatment with acid, determination of their physical properties, and the amount of fixed carbon which is left on ignition in the absence of air. The ultimate composition of such a residuum has been found to be:—

	Per Cent.
Carbon	87.44
Hydrogen	12.50
Sulphur	0.60
	100.54

It will be seen that, as compared with the crude oil, there is a smaller percentage of hydrogen, and a larger one of sulphur in the residuum, which would naturally be expected. On treatment with ordinary and fuming sulphuric acid, however, the hydrocarbons which are unacted upon and which form 53.3 per cent. of the residue, have the ultimate composition of the C_nH_{2n+2} series:—

	Per Cent.
Carbon	84.74
Hydrogen	15.30
Sulphur	0.21
Nitrogen	0.00
	100.25

More than one-half of the dense residuum from Pennsylvania petroleum consists of paraffin hydrocarbons, largely solid paraffins at ordinary temperature.

The further characteristics of such a residuum are as follows:—

Physical Properties.	
Specific gravity, 25/25° ..	0.9202
Flash	186°
Chemical Characteristics.	
Loss 160°, 7 hours ..	5.3 per cent.
Character of residue ..	Soft.
Loss 200°, 7 hours (fresh sample) ..	14.2 per cent.
Character of residue ..	Soft.
Character of residue to constant weight ..	Brittle pitch.
Bitumen soluble in CS ₂ , air temperature ..	99.8 per cent.
Organic matter insoluble ..	2 per cent.
Inorganic or mineral matter ..	0 per cent.
	100.0

Bitumen insoluble in 88° B. naphtha, air temperature. Pitch ..	4.3 per cent.
Per cent. of soluble bitumen removed by H ₂ SO ₄ ..	21.9 per cent.
Per cent. of total bitumen as saturated hydrocarbons ..	74.8 per cent.
Per cent. of solid paraffins ..	11.0 per cent.
Fixed carbon ..	3.0 per cent.

(To be continued.)

THE KEROSENE TRADE OF CHINA FOR 1904-1905.

The British Consular report upon the trade of China during the years 1904-1905 states that with the exception of Borneo, which was short of the import of 1903 by 230,995 gallons, American, Sumatra and Russian kerosene oils shew enormous strides, especially American, which was beaten by Sumatra in 1903. Even in 1904 Sumatra was short of the American import by only 11,047,522 gallons a comparatively small quantity where the total import reaches the enormous figure of 156,891,235 gallons of a value of 27,908,043 Haikuan taels (£3,997,246). Burma put in a modest appearance with close on 1,000,000 gallons; but the Consul understands that steps have been taken to confine this oil to Indian consumption, and it is likely to disappear from the trade returns of China. The Standard Oil Co. is meeting a powerful rival in the Asiatic Petroleum Co., and both sides, where not already provided, are arranging for tank accommodation at all the larger ports, and even along the railways now in working order in the country.

The average import of kerosene oil for the quinquennial period 1900 to 1904 was 109,206,854 gallons. There was a decrease of 3,419,404 gallons in 1905, and, while Russian and Sumatran fell off by 27,369,299 gallons, America, Borneo and Burma nearly filled the gap with an increase of 23,749,895 gallons. The American contribution was 80,046,136 gallons, which was 52 per cent. of the whole import valued at £3,061,516.

THE PETROLEUM TRADE OF AUSTRIA-HUNGARY IN THE FIRST HALF OF 1906.

The following were the exports of petroleum products from Austria-Hungary to various countries during the first half of 1906 in tons:—

	Crude Oil.	Illum. Oil, Benzine, and other Light Products.	Lub. Oil, and other Heavy Products.	Paraffin Scale.	Ceresin.	Ozokerit.	Total
Germany ..	668	31,450	5,907	2,490	66	774	41,355
Hamburg ..	—	17,453	1,291	552	89	10	19,395
France ..	125	12,630	1,245	16	30	38	14,084
Switzerland ..	68	8,306	2,390	90	20	3	10,877
Turkey ..	379	7,942	73	55	9	—	8,458
England ..	—	4,981	1,750	255	12	2	7,000
Italy ..	27	1,405	1,490	243	62	1	3,227
Holland ..	33	179	2,790	32	—	—	3,034
Belgium ..	30	162	2,261	76	3	10	2,542
Other countries	116	1,011	368	1,116	211	88	2,910
Total ..	1,436	85,519	19,575	4,925	502	926	112,882

The imports of petroleum products into Austria-Hungary during the same period were as under:—

	Crude Oil.	Illum. Oil, Benzine, and other Light Products.	Lub. Oil, and other Heavy Oils.	Paraffin, Ceresin, and Ozokerit.	Total.
Germany ..	7	444	135	202	788
Russia ..	—	329	1,190	1	1,520
Roumania ..	6,797	1,311	1	1	8,110
U. S. A. ..	—	1,112	4,878	204	6,194
Other Countries ..	—	106	161	200	467
Total ..	6,804	3,302	6,365	608	17,079

THE COMMONWEALTH OIL CORPORATION, LIMITED.

DIRECTORS' REPORT.

The report of the directors of the Commonwealth Oil Corporation, Ltd., to be presented at the first ordinary general meeting to be held next Tuesday, states that the directors are desirous of placing on record their appreciation of the courtesy and assistance which have from the first been extended to the representative of the company by Ministers and other authorities of the State of New South Wales and the Commonwealth of Australia. The directors are also pleased to have as a colleague Mr. R. Leicester Harmsworth, M.P., whose consent to act was announced to the shareholders at the statutory meeting in February last.

Possession of all the properties agreed to be purchased has been given to the company, and the leases have been either transferred into the company's name or otherwise secured to the satisfaction of the company's

the whole of the company's properties, and is proceeding as early as possible to take up his duties.

It was decided, in view of the great importance of the railway line, to await the result of further detailed surveys before finally authorising the construction. Plans and data came to hand at the beginning of October, and the route was then finally decided upon. Orders were given to press forward with this work, and it is anticipated that the line will be completed for the transportation of shale in the course of next summer.

Surveys and sidings are completed. The cuttings are well advanced, sleepers are prepared, and much of the preliminary work of the railway has been carried out.

Extensive surveying has been carried out in order to enable final plans for the works and township to be proceeded with.



GENERAL VIEW OF THE COMPANY'S REFINERY AT HARTLEY VALE.

solicitors in Sydney, and are in process of being similarly transferred.

Working operations have been started on the company's properties at Wolgan and Capertee, and every effort is being made to realise their speedy development. The progress of mines development has gone on steadily, and very large reserves of shale have been proved. As foreshadowed in the preliminary report of the consulting engineer, issued to the shareholders in June last, it has been found possible to avoid the construction of a costly railway tunnel through the properties. The Wolgan end of the tunnel, which has been started, is being utilised for mine development in order to secure an adequate output of shale for export purposes by the time of the completion of the railway line. The Capertee end of the tunnel has been extremely valuable in proving the unbroken character of the shale bed, but further prospecting operations having shewn the shale seam further east to be much thicker and of superior quality, operations are being carried on at this point. Further development has taken place in connection with the coal deposits, and, as soon as definite information is obtained upon the subject, it will be forwarded to the shareholders. A mining manager, of very considerable experience in connection with shale and coal, has been appointed to take charge of the mining operations on

The New South Wales Shale and Oil Co.'s business was acquired in April last, and a trial balance of the first three months' working shews results in excess of anticipations, but the profit is not included in the balance sheet, as it forms part of the Australian accounts not yet fully rendered. The prices obtained for this company's products have been maintained, and in some cases have improved.

An exhibit of the company's products and the shale from the new properties shewn in Sydney at the recent exhibition there, has, at the cabled request of the New South Wales Government, been included as a part of the State Court at the Government's exhibition in New Zealand.

Sir Wm. B. Avery, Bart., and Mr. D. Elliott Alves are the directors retiring by rotation, and, being eligible, offer themselves for re-election.

DEVELOPMENTS IN MEXICO.

We are given to understand that Messrs. S. Pearson and Sons, Ltd., of Victoria Street, Westminster, S.W., have met with such success in regard to their petroleum developments in Mexico that a large refinery capable of treating four or five thousand barrels of oil per day is being erected at Minatitlan. The refinery has been so arranged that it can be extended to double or treble its capacity when this is necessary. It may of course be taken for granted that this expenditure would not have been made had not the firm thoroughly satisfied themselves as to the supply of the crude oil being sufficient to meet the needs of the refinery.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	5-3/4
Baku Russian Petroleum ..	£750,000 Ord.	£1	3/9-4/3
Bibi-Eybat Petroleum Co. ..	£650,000 5 1/4% Pref.	£1	7/0-7/6
Californian Oilfields ..	£250,000 Ord.	£1	7/0-8/0
Commonwealth Oil Co. Pref.	8/- paid up		5 3/8-5 5/8
" " " D ef.	£1 fully paid		1 1/8
European Petroleum ..	£550,000 Pref.	£1	1/6-2/6
" " " ..	£550,000 Ord.	£1	0/6-1/6
" " " ..	£376,000 Deb.	£100	82-85
Russian Pet. & Liquid Fuel ..	£500,000 6 1/2% Pref.	£1	11/0-12/0
" " " ..	£600,000 Ord.	£1	11/0-12/0
Schibaieff Petroleum ..	£575,000 6% Pref.	£5	2 3/8-2 5/8
" " " ..	£575,000 Ord.	£1	7/0-8/0
Shell Transport & Trading ..	£2,000,000	£1	29/0-30/0
" " " ..	£1,000,000 Pref.	£10	9 1/4-9 1/2
Spies Petroleum Company ..	£312,500	10s.	8/6-9/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on November 5th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	482	485
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,300	4,350
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	169	172
Neft Co.	250	—	—
Nobel Bros.	5,000	8,600	8,700
" " "	250	—	—
Rops and Co., V... ..	250	—	—
Russian Naphtha Co. ..	250	90	—
Society Mazout	250	—	—
Tumaieff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" " " (Second Issue)	250	—	—

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 8th November, 1906, as follows:—

The makers of steel bars in this country are working up to the full capacity of their mills, and the American and German manufacturers are also in the same position, consequently the Welsh makers, being apparently free from outside competition for many months forward, have again advanced their prices, and as a matter of course prices of tin plates are dearer. The majority of makers are well booked up to the end of this year, and in many cases much further ahead, and we make prices of oil sizes to-day as under:—

1c	18 3/4 x 14	124 sheets	110 lbs.	14/4 1/2 to 14/6	per box.
1c	19 1/4 x 14	120 "	110 "	14/4 1/2 to 14/6	"
1c	20 x 10	225 "	156 "	20/3 to 20/6	"

F.o.b. Wales. Tin lining and iron hooping extra.

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8 1/2 pd	£199,750	£10	22 1/4
Do. 6% Cum. Pref. ..	£100,000	£10	12 3/4
Burmah Oil, Ord.	£1,100,000	£1	57s. 6d.
Do. Pref.	£250,000	£1	26s. od.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	8 1/4
Do. 5% Pref. ..	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	44s. od.
Do. New (£8 10s. pd.)	£131,750	£10	43s. 6d.
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	6 1/8
(17s. paid)			
Do. 6% Cum. Pref.	£100,000	£10	12 3/4
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	32s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	76s. 3d.
Do. "B" Deb...	£150,000	£100	162 5/8

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	65	65	1,000
Aurora " (Deb. 5%) ..	94	94	—
Campina Poiana Mij.	18 1/2	18 1/2	—
Dordtsche Petroleum Mij. (Pref.) ..	128	126	500
" " (Deb. 4 1/2%) ..	101 7/8	10 7/8	1,000
Elzasser Petroleum Mij. ..	2	2	1,000
Gaboes " ..	—	—	—
Holl. Rumeensche Petroleum Mij. ...	35	36	1,000
Int. Rum. Pet. Mij. ..	110	109	500
Java Petroleum Mij. (Ord.) ..	—	—	1,000
" " (Pref.) ..	—	—	—
Koninklyke Nederl. Pet. Mij. Shares	729	720 3/4	250-1,000
" " Share certificates	727	728	1,000
Moeara Enim Petroleum Mij. ..	133 7/8	135	100
" " 1-1,000 Oblig. 5	—	101 1/4	250-1,000
" Moesi Ilir " Petroleum Mij. ..	42	42	—
Nederl.-Rumeensche Petroleum Mij.	17 1/4	17 1/4	—
Nieuwe Ned. Petroleum Mij. And...	—	55 1/4	1,000
Oliebronnen in Hannover Mij. ..	135	135	—
" " (Deb. 5%) ..	98	98	—
Panolan Maatschappij Cert. ..	350	355	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	143	145	1,000
" " (Common) ..	122	123 7/8	—
Sumatra-Palembang Petroleum Mij	75 5/8	75 1/8	50
Zuid Perlak Petrol. Mij. (Pref.) ..	134 5/8	127 5/8	—

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analysis that conclusions will be arrived at of a most important character.

Though it is not our intention here to traverse the ground covered by the article to which we have already referred, we would briefly mention one or two points which, to the thinking mind, must have great weight. Let us first take the production of crude oil in America. Four years ago this amounted to 3,538,000,000 gallons; in 1903 it had increased to 4,200,000,000 gallons; for the following twelve months it was 4,900,000,000 gallons, while last year it reached 5,670,000,000 gallons.

Thus we see that in the short space of four years the crude oil output in the American fields practically doubled itself, while during the present year the increase promises to be even greater than any that have gone before it. Side by side with the crude production we will place the figures relative to the export trade. Here we find that in spite of the continuous increase in the crude oil production, the trade in petroleum products with other countries has remained almost stationary at about 1,000,000,000 gallons per year. At the same time the largest item in the export trade—that of illuminating oil—is steadily on the decline. This becomes the more pronounced as time goes on, and would for a certainty decrease to a still larger amount were it not for the stagnant state of the Russian export trade.

These facts prove without a doubt that the further development of the American petroleum industry in regard to the output of refined products has already passed its zenith, and consequently it is of the utmost importance to see whether it is at all possible to foster a large and steadily growing liquid fuel trade at home such as will constitute an outlet for the enormous production of crude oil, or whether sources of consumption other than those already existing can be found.

It is quite true that there is a certain increased consumption of motor spirit, but inasmuch as most of the American oil fields which have lately been developed, and are to-day producing some millions of tons, yield an oil which contains but a very small percentage of benzine, this phase of the question can have but little effect upon the consumption in the future. The new fields produce an oil which, speaking generally, is of a heavy character, and suitable only for fuel purposes, and so it naturally follows that it is in regard to the development of oil for fuel purposes in America, that the success and future of the American petroleum industry is wrapt up.

In Russia we are aware that the annual production of coal is about 20,000,000 tons, and under ordinary conditions the oil fields yield 10,000,000 tons annually. Yet the coal has always proved the predominant regulator of prices for liquid fuel, and thus still more will this be the case in America where the coal production is 400,000,000 tons per annum as against the 22,000,000 tons of oil production. As in Russia, so to a greater extent will it be the case in America, of oil fuel being always regulated by that of coal, and it is only in the possibilities of oil being sold to the consumers at a lower figure than coal, that the American liquid fuel industry stands any great chance of developing to the extent many desire and even look for in the future.

In the article to which we have already referred we

give the local prices for both coal and oil in the several producing fields, and from this it will be easily seen that it is only in California and Texas that oil is capable of holding its own against coal as liquid fuel. On the other hand, in the Mid Continent fields, which include Kansas and Indian Territory, and where the coal industry is as yet in its infancy, oil cannot successfully compete with the coal in the matter of price.

This being so, then those connected with these fields who have been during the past year or two raising an agitation for more profitable and less oppressive prices should take heed of the future and be content so long as they are receiving profitable figures for their oil. That prices are bound to fall still lower than at present is certain, and in this respect our candid opinion is that though the pipe line which it is now proposed to build to the Gulf of Mexico, may do much in carrying away some of the enormous production of the fields, it will do very little in the way of prices. Wherever the oil eventually lands, if it is to command a market, then its price must be below that of coal from a comparative power-giving standpoint, and it is with a full knowledge of this that we fail to see the dawn of that highly prosperous day the operators in those central fields are looking forward to. Presuming an export trade in the fuel is anticipated, even this will not do much to relieve the position for the competition of coal will be ever present.

The inference will already have been gathered. The day for inflated prices for the producers is fast passing away, and it will only be by the careful management of their wells and the practising of the strictest economy that their business of oil production can be profitably worked. There is without a doubt a wide field for liquid fuel in America, but at a price—a price which will work out proportionately lower than coal, which will ever be the regulating factor.

This and this alone is the basis upon which America can foster an increasingly large liquid fuel trade at home, and it is this conclusion, which an investigation of what many might look upon as the “unlikely” has led us to.

LONDON OIL SHARE MARKET.

FRIDAY, NOVEMBER 9TH.

The past fortnight has not been prolific in changes in the Oil Share Group on the London Stock Exchange, and where changes occur they shew an irregular tendency. General business remains very restricted owing to the monetary stringency. On Saturday, October 27th, the following quotations ruled:—Anglo-Russians 0- $\frac{1}{8}$, Assam Oil $\frac{5}{8}$ - $\frac{7}{8}$, Baku Ordinary 3s. to 3s. 6d., Preference 5s. 6d. to 6s. 6d., Bibi-Eybats $\frac{7}{16}$ - $\frac{9}{16}$, Debentures 86-91, European Preference $\frac{1}{16}$ - $\frac{3}{16}$, Debentures 82-85, Californian Oil Fields 5 $\frac{1}{2}$ -6, Refineries 1-1 $\frac{1}{8}$, Russian Ordinary 11s. 3d. to 12s. 3d., Preference 11s. to 11s. 6d., Debentures 90-93, Schibaieff 7s. 6d. to 8s. 6d., Preference 2 $\frac{1}{2}$ -3, Shell Transport Ordinary 29s. 6d. to 30s. 6d., Preference 9 $\frac{1}{4}$ -9 $\frac{3}{4}$, and Spies $\frac{1}{3}$ $\frac{1}{2}$ - $\frac{1}{3}$ $\frac{5}{8}$.

Although a number of shares have changed hands both in Assam Oil, Spies and Shell Transport Preference, no alterations have taken place in the price, but Bibi-Eybats fell $\frac{1}{8}$ on Monday to $\frac{5}{16}$ - $\frac{7}{16}$, at which figure they remain stationary, while the Debentures on the following Saturday were quoted ex-dividend at 84-89 and European Debentures also had it deducted, leaving price 79-84. Californian Refineries have been in request advancing first to 1- $\frac{1}{16}$ -1 $\frac{3}{16}$ and then to 1 $\frac{1}{8}$ -1 $\frac{1}{4}$, but highest value has not been quite maintained, and as we write the price is steady at 1 $\frac{1}{16}$ - $\frac{3}{16}$. Baku Ordinary gained 9d. per share at 3s. 9d. to 4s. 3d. and the Preference 1s. at 6s. 6d. to 7s. 6d. Schibaieff's Issues have kept dull, and on balance the ordinary shares have dropped 6d. at 7s. to 8s. and the preference $\frac{1}{4}$ at 2 $\frac{1}{2}$ -2 $\frac{3}{4}$.

FROM INDIAN TERRITORY TO THE GULF OF MEXICO.

PIPE LINE TO BE LAID.

At last we have something definite as to the Indian Territory-Gulf pipe line, for not only is the scheme to be carried out, but the preliminary details are now practically completed, and work will commence at the earliest possible moment.

At a meeting of the stockholders in the Texas Co. held in Beaumont in the middle of last month the subject was discussed, and a scheme authorising the laying of nearly 500 miles of pipe line was agreed to. At present the capital of the Texas Co. is \$6,000,000, but in view of the great undertaking that is to be accomplished by the construction of the pipe line, the company's capital is to be increased to double that amount, the 60,000 shares of new stock at a par value of \$100 per share having already been financed.

The *Oil Investors' Journal*, speaking of the scheme in its last issue, states that it is understood that the plan is to lay an eight-inch trunk line from a plot near the centre of the oil developments in Indian Territory to a junction with the present terminal point of the Texas Co.'s line at Humble—about 70 miles due west of Beaumont. The present trunk line which the Texas Co. has extends from Humble to Port Arthur, where the company's refinery and deep-water loading dock is situated, and is 90 miles in length.

It is anticipated that though under ordinary circumstances it would take about a year to complete the line, the work will be pushed forward with such energy that the construction will be complete by mid-summer next, when anybody's oil will be run from the Territory field through the pipe line at a posted charge. The pipe line will probably be able to handle 20,000 barrels of crude oil per day, or roughly one-fifth of the total production of the Territory field. During the past few weeks, it will be remembered that so great has been the glut of production that production has been reduced as much as possible, so that the present difficulty may be overcome, while also the Prairie Oil and Gas Co. is now removing about 40,000 barrels daily of Territory oil.

It is interesting here to say a word or two of the history of the Texas Co., which is moving in so practical a manner to establish a wider outlet for the production of the Mid-Continental fields. During the past five years the Texas Co. has taken a leading part in the development of the petroleum industry of Texas. It has to-day a system of trunk pipe lines of over 200 miles in length, touching many of the important fields of produc-

tions, and possess the only pipe line from Humble to Houston. At Port Arthur the company has a refinery which is capable of treating about 100,000 barrels per month, and it is here also that much of the storage is situated. A second refinery has been built at Port Neches, this having a similar capacity. The career of the company has been most successful since its organisation, and, under the able guidance of the president and general manager, Mr. J. S. Cullinan, there is every reason to believe that the latest scheme of the company will add laurels to its already enviable fame.

THE EUROPEAN PETROLEUM COMPANY, LIMITED.

DIRECTORS' REPORT.

In presenting their annual report to the shareholders, the directors of the European Petroleum Co. state that the profits for the year ended April 30th (o.s.) have amounted to £44,675 19s. 1d.; from which must be deducted interest on debentures, etc., £32,355 17s. 10d. and provision for income tax, £370; or a total of £32,725 17s. 10d., thus leaving a sum of £11,950 1s. 3d.

The board are of opinion that depreciation, wells renewal, and reserve require a sum of £65,000, and after this provision has been made, there will be a debit balance on the year of £53,049 18s. 9d.

The gross production of crude oil from the company's properties at Baku during the twelve months amounted to 5,502,382 poods, which, less royalties, gave a net production of 5,340,531 poods, as compared with 10,242,838 poods for the preceding year.

The decrease in production is due to the extremely unfavourable conditions prevailing at Baku throughout the year. Political disturbances and strikes of workmen have been almost continuous, while there was actual suspension of all operations on the oil fields from 4th September to 18th October, 1905.

Subsequent to the close of the financial year work was again suspended from 6th July to 13th September, 1906. The price of crude oil has remained good, having fluctuated between 17 and 28 copecs during the year under review.

An issue of £300,000 out of the £400,000 second mortgage debentures authorised by the shareholders has been successfully carried through. The directors have elected Mr. Howard Fowler to fill the vacancy caused by the death of his father, Mr. William Fowler. Mr. Alfred Fowler has retired, and Mr. Lock and W. Ritter von Ofenheim have joined the board. These appointments are submitted for confirmation.

Under the provisions of the articles of association, one of the directors, Mr. J. Howard Fox, retires; being eligible, he offers himself for re-election.

The meeting of the company is to be held at Winchester House next Tuesday, at 12.30 o'clock.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO NOVEMBER 5th, 1906.

IN GALLONS.

[ALL RIGHTS RESERVED.]

COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Oct. 22.	From Jan. 1.	Since Oct. 22.	From Jan. 1.	Since Oct. 22.	From Jan. 1.	Since Oct. 22.	From Jan. 1.	Since Oct. 22.	From Jan. 1.	Since Oct. 22.	From Jan. 1.	Since Oct. 22.	From Jan. 1.	Since Oct. 22.	From Jan. 1.
Austria ...	—	2,118,640	4,000	374,890	4,000	87,930	—	—	—	—	—	—	—	—	8,000	2,592,460
Belgium ...	—	370	16,680	430,898	—	11,000	—	—	—	5,300	—	—	—	5,367	16,680	441,935
Canada ...	—	—	—	47,460	—	56,400	—	—	—	—	—	—	—	200	—	104,060
Dutch India ...	—	480	—	960	—	192	—	—	—	11,689 130	—	1,010	—	1,920	—	11,693,692
Germany ...	1,277,540	6,383,820	21,250	1,202,403	—	—	—	—	—	2,380	—	—	400	16,962	1,299,190	7,606,645
Holland ...	—	10,180	—	2,920	—	9,440	—	—	34,000	1,446,673	—	271,000	6,160	75,800	40,160	1,423,733
Roumania ...	825,000	6,290,745	—	—	—	—	2,087,880	—	—	1,892,460	—	—	—	—	825,000	10,271,085
Russia ...	1,033,600	29,174,420	7,380	4,314,111	—	—	3,731,473	—	—	6,210	—	—	—	5,660	1,010,980	37,231,874
U.S.A. ...	5,323,480	81,835,965	1,556,670	34,557,391	—	669,168	1,835,680	38,034,188	456,530	7,300,730	—	9,072,430	16,140	1,749,904	9,388,500	173,409,686
Other Countries	—	1,655	740	32,732	—	—	—	—	—	4,130	3,840	3,840	—	214,410	4,580	256,767
	8,159,620	125,816,275	1,606,720	40,963,765	4,000	834,130	1,835,680	43,853,511	490,530	22,317,013	3,840	9,348,280	22,700	2,070,223	12,423,090	245,431,937

ANOTHER PATENT FOR SOLIDIFIED PETROLEUM.

The question of solidified petroleum is still receiving the attention of inventors, and patent specifications have recently been accepted in America in favour of Mr. J. M. A. Stillesen, 412, Clinton Street, Brooklyn, New York, U.S.A., for improvements in the solidification of petroleum for use as fuel. The principal object of the invention is to provide an improved process or method of solidifying petroleum either under heat or at the normal atmospheric pressure, and thereby to produce an improved compound which can be handled and transported and used after the manner of using coals and other solid fuels. Where it is desirable to employ heat the following ingredients are used in about the proportions stated for each 100 lb.—viz., 75 lb. petroleum, 16 lb. raw turpentine, 2 lb. sodium palmitate, or sodium stearate, or a mixture of both, 5 lb. caustic soda, and 2 lb. water. The petroleum is poured into a suitable vessel arranged to be heated by steam, the turpentine and palmitate or stearate of soda is added, and the whole brought up to about 100° C., at which temperature the turpentine and the palmitate or the stearate is dissolved in the petroleum. When all is dissolved there is added, a little at a time, a concentrated solution (60 per cent.) of the caustic soda, maintaining a powerful agitation, nor allowing the temperature to go below 100° C. When it is desired to proceed by the cold process, the following ingredients are employed in about the proportions stated for 100 lb.—namely, 65 lb. petroleum, 2 lb. sodium palmitate or sodium stearate, or a mixture of both, 20 lb. resin, 1.5 lb. tallow, 7 lb. caustic soda, and 4.5 lb. water.

The inventor claims that, under this method of procedure, the rosin, the palmitate or stearate, or a mixture thereof, and the tallow are dissolved in the petroleum, after which a strong solution of caustic soda is added, a little at a time, taking care that the mass is kept clear. When it commences to thicken it is thoroughly stirred, and afterwards poured into a form or mould and stirred until it becomes stiff. The particular ingredients may

be varied somewhat, as, for instance—66 lb. petroleum, 10 lb. resin, 2.5 lb. tallow, 2.5 lb. palm oil, 6 lb. caustic soda, and 13 lb. water. In this instance the palm oil and tallow are first melted, and then both, together with the rosin, are dissolved in the petroleum; afterwards, about one-fourth of the caustic soda is added to the solution. If the solution while being stirred should become muddy, grey or black, then enough of the water is added to make it flow clear, after which the balance of the caustic soda and water is added and the solution is heated, while being powerfully agitated, until it stiffens

IMPORTS OF PETROLEUM PRODUCTS INTO GERMANY DURING SEPTEMBER.

The imports of petroleum products into Germany during September, as compared to August, were as follows:—

	September. Tons.	August. Tons.
Illuminating Oil	71,496	47,223
Lubricating Oil	13,240	12,961
Crude Benzine	8,582	4,964
Refined Benzine and Petroleum Ether	1,387	1,340
Crude Oil	1,297	1,916
Residuals	91	45
Artificial Turpentine and other mixtures	83	73
Gas Oil	98	114
	96,274	68,636

The imports of petroleum products from the various producing countries were as under:—

	September.	August.
U.S.A.	67,764	49,370
Russia	10,552	8,013
Dutch-India	7,038	3,213
Austria-Hungary	6,379	3,767
Roumania	2,611	3,196
Other Countries	1,930	1,077
Total	96,274	68,636

The quantities of various petroleum products exported from Germany during September were:—Illuminating oil, 133 tons; lubricating oils, 773 tons; residuals, 195 tons; crude and benzine, 588 tons; total, 1,689 tons.

GULF REFINING CO., Refiners of **Texas Petroleum.**

Superior Lubricating Oils We make a Speciality of **OF HIGH VISCOSITY AND LOW COLD TEST.**

Prompt Shipments from New York, Philadelphia,
Boston, New Orleans and Port Arthur, Texas.

Special Prices to Large Jobbers and Refiners.
CORRESPONDENCE SOLICITED.

General Sales Office—**FRICK BUILDING ANNEX, PITTSBURGH, PA., U.S.A.**

European Representative—**H. E. WATSON, 10, RUE THIMONNIER, PARIS, FRANCE.**

GASOLENE ENGINES AND THE TORPEDO BOAT.

According to the *Scientific American* it is only a question of time before the internal-combustion engine will be given a serious trial in the propulsion of torpedo boats. The valuable quality of developing large power in proportion to the weight of the engine, and the wide radius of action for a given weight of fuel, which can be secured by the use of gasoline, are qualities which have always commended themselves strongly to the consideration of the naval architect. The first serious attempt to produce a motor-driven torpedo boat of practical size and sea-going ability has recently been made by Yarrow, and he has succeeded in turning out a craft whose success was so pronounced that it has been purchased by the Admiralty, and seems likely to become the nucleus of a fleet of similar boats.

Of late years there has been a tendency to depart from the essential principles upon which torpedo flotillas were built. The original theory was that these flotillas should be made up of a large number of small craft, each of high speed, and presenting, because of its small size, a difficult object to hit, and costing but little to build. In the desire to raise the speed, the designers have been driven to increase the length, until from their original 75 ft., torpedo boats have grown to an over-all length of 150 ft. The increase in their cost has necessarily led to a decrease in the number to be built, and consequently torpedo flotillas have lost that most valuable element of bewildering numbers, on which the chance of getting home a successful blow on a warship so largely depended.

In casting about for a type of boat which would accommodate itself to the demand for a restriction of size, it was realised that the motor-driven boat presented the best possibilities, and the matter has been so well worked out that the new motor torpedo boat, although it is only 60 ft. long by 9 ft. beam, has proved able to make a trial speed of 26.15 knots and sustain 24 continuously on a sea trip of many hours' duration. The economy of weights which has been secured by the adoption of the gasoline motor is shewn by a comparison of this vessel with a torpedo boat of similar dimensions driven by steam, which, if it were carrying the same load, would be able to attain only 18 knots an hour as compared with 24. Furthermore, the radius of action of a steam-driven boat for one ton of coal would be only 60 miles, whereas for one ton of oil the motor torpedo boat would be able to cover 300 miles. The fact that the little craft weighs only 8 tons, and is but 60 ft. in length, adds enormously to its mobility in naval operations; for a whole flotilla of them could be loaded on to the oars, and transported to any desired point along the coast with ease and dispatch. The probable method of defence with these vessels would be to arrange a series of special stations at the mouths of rivers and harbours, where they could run in for shelter or supplies, and so protect a long stretch of coast line with a continuous chain of torpedo defence, which could be quickly concentrated by rail in large numbers at any point which

might be threatened. Although for aggressive operations such craft as these can never in any sense supersede the battleship, it is worthy of note that over three hundred of them could be built for the price of a single "South Carolina" or "Michigan."

INVESTIGATION OF THE CRACKING GASES OF A BAKU CRUDE OIL.

By C. ENGLER and L. ROSNER.

The Baku crude oil submitted to distillation was of a dark brown colour, was viscous, and possessed a pleasant essential odour. The specific gravity was 0.912 at 15° C. A normal distillation in an Engler flask yielded the following results:—

	Percentage by Volume.	Specific Gravity.
Benzine, 95–104° C.	4	0.775
Illuminating Oil, 140 to 280° C.	31	0.847
Cracking Distillate, above 280° C.	50	0.902
Loss (gases)	6	
	100	

The cracking process was carried out under conditions as near those prevailing in actual refinery practice as possible. The results of the cracking process were as under:—

	Per cent.
Cracking Distillate	78
Coke	12
Gas	10

On the assumption that in paraffin hydrocarbons only methane and aethane were contained in gas, the latter will have the following composition:—

	Percentage by Volume.
Carbonic Acid	0.6
Unsaturated Hydrocarbons	12.0
Oxygen	1.0
Carbon Oxide	2.2
Hydrogen	8.8
Methane	43.0
Aethane	31.9
Sulphuretted Hydrogen	0.6
Total	100.1

The condition of the saturated hydrocarbons changes, when, besides aethane, there are also present its homologues. It may be accepted as certain that in the gases investigated there are about 75 per cent. by volume of methane and its homologues. By comparing the above results with the analyses of natural petroleum gases we find that qualitatively it shews a striking analogy with the latter.

Carbon oxide is, according to Bunsen and Schmidt, found in natural gas at Baku, and, according to Engler, also at Pechelbronn. This seems to point to analogous conditions in the formation of cracking gases and of natural gases. The process of formation is the more readily understood if we accept the organic theory of the formation of petroleum, and not ascribe its origin to the decomposition of carbides.

The calorific value of the gases analysed calculated by their chemical composition should be not less than 8,400 thermal units corresponding to an evaporating power of 13.2. If we further bear in mind that on the average about 10 per cent. by volume of the petroleum residuals submitted to a cracking distillation is transformed into gases, it will be readily understood how important it is that these gases should be utilised in a suitable manner.

THE EUROPEAN PETROLEUM COMPANY, LIMITED.

Dr. PROFIT AND LOSS ACCOUNT for the Year ending 13th May (30th April, o.s.), 1906. Cr.

	£	s.	d.
To Repairs to Steamers	13,679	10	10
To Management Expenses	3,148	13	10
To Legal Expenses and Notarial Fees	157	13	10
To Travelling Expenses	170	14	6
To Trustees', Experts' and Auditors' Fees	972	0	11
To Directors' Fees (less £1,217 14s. 3d. waived)	1,921	6	3
To Balance carried down	44,675	19	1
	<u>£64,725</u>	<u>19</u>	<u>3</u>
To Interest on Debentures	22,796	14	3
To Interest on Loans, etc., less Exchange	9,559	3	7
To Provision for Income Tax	370	0	0
To Reserve for Depreciation, Wells Renewal, etc.	65,000	0	0
	<u>£97,725</u>	<u>17</u>	<u>10</u>

	£	s.	d.
By Profits derived from Oil sold, Steamers' Freights, etc.	64,715	9	3
By Transfer Fees	10	10	0
	<u>£64,725</u>	<u>19</u>	<u>3</u>
By Balance brought down	44,675	19	1
By Balance carried to Balance Sheet	53,049	18	9
	<u>£97,725</u>	<u>17</u>	<u>10</u>

Dr. BALANCE SHEET at 13th May (30th April, o.s.) 1906. Cr.

CAPITAL AND LIABILITIES.			
	£	s.	d.
To Share Capital, viz.:—			
Authorised and issued—			
550,000 7½ per Cent. Cumulative Preference Shares of £1 each	550,000	0	0
550,000 Ordinary Shares of £1 each	550,000	0	0
	<u>1,100,000</u>	<u>0</u>	<u>0</u>
Deduct 20,238 Cumulative Pref. Shares, forfeited as per last Account .. £20,238 0 0			
Less 10 Shares re-issued	10	0	0
	<u>20,228</u>	<u>0</u>	<u>0</u>
			1,079,772 0 0
To Six per cent. First Mortgage Debentures authorised and issued	550,000	0	0
Deduct Debentures purchased and cancelled under operation of Debenture Service Fund, as per last account	174,000	0	0
	<u>376,000</u>	<u>0</u>	<u>0</u>
To Interest accrued on above	803	10	1
			<u>376,803 10 1</u>
To Six per cent. Second Mortgage Debentures—			
Authorised .. £400,000 0 0			
Issued	300,000	0	0
Deduct Instalments outstanding—not yet due	75,785	0	0
	<u>224,215</u>	<u>0</u>	<u>0</u>
To Interest accrued on above	236	14	3
			<u>224,451 14 3</u>
To Loans (£2,282 13s. 0d. secured)	39,876	17	10
To Sundry Creditors (including Reserves for Insurance £12,886 1s. 1d.)	99,436	10	2
To Amounts received by the Company on account of Advance Sales of Crude Oil	29,822	2	0
To Forfeited Shares Account	5,097	0	0
To Contingent Liabilities on Bills Discounted, etc., £3,763 8s. 10d.	<u>£1,855,259</u>	<u>14</u>	<u>4</u>

ASSETS.			
	£	s.	d.
By Freehold and Leasehold Properties, and Tank Steamers:—			
Balance as per last account	1,773,537	9	9
Add Expenditure during the year to date on New Borings, Buildings, Plant and Machinery, etc.	45,726	1	7
	<u>1,819,263</u>	<u>11</u>	<u>4</u>
Deduct Depreciation and Wells Renewal Account, including Depreciation of Leaseholds:—			
As at May 13th, 1905	£255,374	4	10
Additional amount now reserved	65,000	0	0
	<u>320,374</u>	<u>4</u>	<u>10</u>
			<u>1,498,889 6 6</u>
By Floating Assets of Steamers, Insurance Premiums unexpired, average claims recoverable, etc.			15,364 15 7
By Stocks of Oil, Iron Casing, and Sundry Materials			13,650 13 5
By Sundry Debtors, etc.			19,251 18 9
By Cash at Bankers and in hand	17,736	11	7
Do. in hands of Trustees for Debenture Holders	4,410	0	0
	<u>22,146</u>	<u>11</u>	<u>7</u>
			<u>1,569,303 5 10</u>
By Discount on issue of £300,000 Second Debentures at 50 per cent.	150,000	0	0
Add Expenses of Issue	15,220	0	0
(To be written off over a series of years.)	<u>165,220</u>	<u>0</u>	<u>0</u>
By Profit and Loss Account—as at May 13th, 1905	67,686	9	9
Add Loss for the Year to date after charging £65,000 for Depreciation and Wells Renewal	53,049	18	9
	<u>120,736</u>	<u>8</u>	<u>6</u>
			<u>£1,855,259 14 4</u>

In accordance with the provisions of the Companies' Act, 1900, we certify that all our requirements as Auditors have been complied with. Having examined the above Balance Sheet with the books and vouchers in London and with the Statements of Account received from the Oil Properties, we report that, subject to the provision for depreciation being sufficient, the Balance Sheet is, in our opinion, properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs as shewn by the said Books and Statements.

3, FREDERICK'S PLACE, OLD JEWRY, E.C.
29th October, 1906.

PRICE, WATERHOUSE & CO.

CANADIAN OILFIELDS, LIMITED.

FOURTH ANNUAL MEETING OF SHAREHOLDERS.

The fourth annual meeting of the shareholders of the Canadian Oilfields, Ltd., was held at the offices of the company, No. 1, St. Mary Axe, E.C., on Friday afternoon the 2nd inst., the Chairman, Maj.-Gen. Sir W. Henry R. Green, K.C.S.I., C.B., presiding, the other directors present being Mr. J. Evelyn Gladstone, Mr. E. L. Bentley, Mr. Alex. F. Hood and Mr. Robert D'Oyly Noble.

The SECRETARY, Mr. H. J. HARDY, F.C.I.S., having read the notice convening the meeting and the report of the auditors,

The CHAIRMAN rose to move the adoption of the report and balance sheet, which, he said, he thought the shareholders would prefer to take as read, inasmuch as they had been previously circulated. Proceeding, Sir Henry Green said:—The past year has been an uneventful year with us, and as the information which we have given at the previous meetings had been so full as regards all branches of our business, I do not think I need amplify past remarks. The main points are that last winter was a normal one, and the pumping has been carried on uninterruptedly. The production has not been quite so great, but the natural shrinkage has been mainly at Moore. You will readily understand that when the wells are first bored upon a new property, they should give, and in our case they did give, a very prolific yield in the initial stages prior to settling down to what may be termed a regular pumping production. We should naturally prefer that the original flow of oil should continue, but no one acquainted with the business ever looks for a maintenance of the initial pressure.

Our production may be sharply divided under two heads:—(1) older wells, and (2) the Moore District wells. The old wells have shewn only a slight falling off, in fact, not up what might reasonably have been expected, and this is the more gratifying as we have not bored any new wells in our older territory to replace what may be termed the normal diminution in production. Our new capital was put into Moore, and to shew that we have had a good return for it, I have only to mention the fact that the Moore plot, which inclusive of the developments, stands in the company's books at about £7,000 to £8,000 has given a production of oil during the year amounting to about 11,100 barrels, of a value about £4,200, or, after deducting pumping and other expenses at the wells, an approximate net return equal to about 40 per cent.

As regards the sale price of the oil, this you will observe from the report has fluctuated between 1'80 and 1'90 dollars per barrels, and is now steady at 1'82½, this, of course, being inclusive of the Government bounty.

Turning now to the balance sheet, you will see that our debentures outstanding have remained stationary, viz., £15,000, and the outstanding mortgages have been reduced from £2,649 to £2,340. In our last balance sheet we had sundry creditors and bills payable amounting to £2,149. This year the corresponding item is £1,547, so I think you will agree that our trade debts are only trivial. On the asset side, our wells equipments and cost of renewals have risen from £36,769 to £41,466, representing additional capital expended. The freehold land has remained the same. The pipe lines and renewals are only £240 in excess of last year. The pumping installations have increased from £9,790 last year to £10,066 this year, due to the necessary additions upon the Moore plot, where a more powerful plant has had to be erected for working the new borings. The underground storage shews a slight reduction, but the next item of drilling rigs, dwelling houses, etc., has risen by about £314.

The depreciation fund stands at about £1,880, which, of course, would be quite insufficient if it were not for the nominal value at which our Moore property stands in the books. Depreciation is certainly linked to a great extent to the sale value of any property, and we have no hesitation in saying that we could sell our Moore property for many times more than it stands in our books.

The stocks of materials are about £134 less. The increase in the formation account is caused by the costs and expenses of guaranteeing the new preference issue being charged thereto. The stock of oil is almost the same as last year, while sundry debtors are slightly less. The next item is a new one—cash deposited with the trustees for the debenture holders, £308. This arises from the sale of a small piece of our property which was not being used by us, but which was, nevertheless, subject to the trust deed. This sale was a satisfactory one to the company. The cash in hand at the close of last year was £393, and this year it was £902.

Turning to the revenue account, you will observe that the expense of pumping the oil has been reduced this year by about £670, this being due to the persistent effort in Canada to reduce the expenses

there, while the salaries also shew a reduction of about one-eighth. The fire insurance remains practically the same, and also taxes. General charges shew a slight increase, while mortgage and bank interest display a falling off of about £45. On the other side of the revenue account, the general revenue shews a reduction of about £1,680 solely occasioned by the circumstances above explained. In the profit and loss account, the first two items are rather less than last year, as also is the aggregate of the total expenses. The amount written off formation account is £250, whilst £380 is carried to the reserve fund for depreciation, to which matter I have already alluded. The balance to be dealt with is £5,168, as contrasted with £5,677 last year. The net result of the profit and loss account is that we have a balance available for division of £2,899, as against £3,190 last year. It is now proposed to pay the usual dividend of 7½ per cent. upon the preference shares, which will absorb about £2,870, the new issue not ranking for the full year. You will observe that reference is made to a re-adjustment of our debenture issue which only stands at £15,000, whereas our assets have increased to £90,000 by the issue of the balance of the preference shares. You will recognise at once that this is quite disproportionate, and whilst the rate of interest is 7 per cent. the same as was being paid on certain mortgages on the property when the company was formed, the board feels that the time has come when this should be changed as the debentures are an excellent security and the property quite capable of carrying a larger issue.

We propose, therefore, to convert at the first opportunity the present 7 per cent. debentures, and to increase the issue to £35,000 or £40,000 at a lower rate of interest. This would give the company ample funds to carry on continuous boring at Moore, where we still have a large portion of property awaiting the drill with an assured result. We should be glad if the shareholders will do anything they can to co-operate to this end, as it would enable us to put down a large number of wells and greatly contribute to the company's prosperity.

I now beg to move the adoption of the report and accounts, and that a dividend at the rate of 7½ per cent. for the year ended June 30th be and is hereby declared payable forthwith on the preference shares of the company as issued at that date.

Mr. NOBLE said he had very much pleasure in seconding the resolution proposed by their chairman, and in doing so he had but very little to add to the very exhaustive *resumé* of the company's business that has already been given them. But he desired to just tell the shareholders a little about the recent developments made south of their land, which developments appeared to him to be of great significance and importance. He had within the past few days received information as to the new oil field known as the Tilbury field which was situated south of the Moore land. He thought it was well to understand that it was generally conceded that the older wells spoken of in the report were upon an oil belt which differed very much from the Moore oil belt. The Moore field had a different oil belt running in a different direction—from north to south. In a line due south of their Moore land, the Tilbury oil field had been discovered, where there were now about 30 wells, 20 of which were flowing, and 10 pumping wells, the production being about 6,000 barrels per week. According to the latest information of the trend of the oil-belt, it went almost directly towards their Moore oil field. But the depths at which oil was found were very different. The depth at which oil was found in the Tilbury field was about 1,400 feet, while in Moore they only went about 475 feet down, and so that had led the operators to the conclusion that perhaps they had a deeper vein in the township of Moore than they had found up to the present and that the 1,400 feet vein continued north over the township of Moore. Of course, if they succeeded in getting to that deep vein of oil in Moore it would totally alter the complexion of their company, because those deep wells which were drilled in the Tilbury field pumped a great deal more oil than was the case in the Moore field, while the oil was also of a better quality. The developments had been going, as he said, north, and he had just heard that one well was being put down to a depth of 1,400 feet immediately south of the Moore farm. That well was on the Saunders farm, and the depth of 1,400 feet was expected to be reached by the end of this year, and the majority believed that the drillers would succeed in getting to the deep vein. If they did, then it would make a vast difference to the affairs of their own company. As that information was

considered of the greatest importance to the shareholders, he had thought it well that they should know all about those new developments. He had pleasure in seconding the adoption of the report.

Mr. Moss (a shareholder) enquired if the directors had fixed or suggested a rate of interest for the new debenture issue, because 7 per cent. seemed to be pretty high, especially as the debenture stock would be covered two and a-half times by the value of the company's property. The speaker proceeded to draw attention to the necessity of developing their property, remarking that as we have the oil on the property, it is of no use sitting and looking at it, and he emphasised the point that no company can stand still—it must either go forwards or backwards. He urged that no time should be lost in giving effect to a policy of progressive development, and hoped that the directors would be able to get the debenture money at 5 per cent or $5\frac{1}{2}$ per cent.

ANOTHER SHAREHOLDER enquired if any drilling was being carried out at the present time, and the Chairman replied in the negative.

Mr. BENTLEY: Until we get further money from debentures we thought it not desirable to bore more wells excepting that we might have one rig drilling to really keep pace with the natural shrinkage of the wells. That is to say, one boring rig might take the place of depreciation because it is quite evident that we must continue boring if we wish to maintain our revenue.

Mr. Moss: But what would be the difference in the cost of boring a well 1,400 feet instead of about 400 feet?

Mr. SUTHERLAND: I should say it would cost about £1,000 instead of about £120.

Mr. Moss: Then we should want a much larger capital?

Mr. SUTHERLAND: Naturally, but you will have a more than proportionate return on it. You will remember that in my original report I said you should have had more capital.

Mr. SUTHERLAND again mentioned that, although the deeper drilling would be more costly, the wells would be able to earn a greater sum of money, and at the same time the standing expenses would be the same.

Mr. BENTLEY: I personally do not think we should attempt to drill deeper wells while we have absolutely certain results from the upper stratum.

The CHAIRMAN said that it behoved them to watch the new developments closely. If oil was struck at a greater depth to the south, then they ought to drill deeper themselves, for the return would be very great indeed.

Mr. BENTLEY: Very good; but not until we have sufficient funds for that purpose.

At the request of the Chairman, Mr. SUTHERLAND, the Company's Technical Consultant, addressed a few words to the shareholders. He said that since the last meeting he had again visited and inspected the company's properties. He was there in June of this year when he visited the wells on most of the properties, and was exceedingly pleased to find that everything was going on well except drilling—a thing which he very much regretted. He could say with certainty that the shareholders had a very conservative body in their directors who did not care to run risks, but liked to see a safe return for their money before they spent it. Yet it was a sad thing to see wells that had given, and some of which were still giving excellent results, and all around a vast piece of ground upon which there was no new drilling being carried on. He had no doubt at all in his mind when he said that everything the company had done in carrying out his suggestions had shewn valuable results. If they took, for instance, the Moore territory, their Chairman had told them yielded about 40 per cent. profit on the capital sunk, but until they stopped drilling they were receiving 60 per cent., and the diminution in result was solely due to not drilling. There was no oil property in the world which could be carried on successfully if they did not drill wells, just as in any mining enterprise they must continue development work if they desired a continuance of successful results. He had already told them that if they spent more money upon drilling they would increase their production and at the same time their profits would increase more than proportionately, because the standing expenses were the same. He did not know any property which was carried on more cheaply than theirs. The manager, who did not receive a high salary, gave his time and devoted his attention most faithfully to their interests. Then they had foremen, who were very reliable men of a good type, and all round he was sure the company was exceedingly well served.

The older properties, he was glad to note, had continued to keep up the same rate of production, which was an exceedingly satisfactory thing. He trusted the recommendations he had made

more than once that they should investigate the neighbouring territories would be borne in mind. It was, he thought, a mistake to be in a country like Canada, where huge developments were going on, and not to have their eyes open to what they saw around them, and be willing to devote a proportion of their earnings to prospecting work. They could, if they liked, take up large areas of land upon a royalty basis, and if successful results were obtained they could sell off a large portion or raise further capital for development. With reference to the Tilbury district, he could say that that was a most important field, but he had not gone into the question of obtaining results at a lower depth, yet he thought the cost of drilling and casing to the extra depth might not exceed £1,000 per well. That, of course, all depended upon the depth drilled, and the thickness of the casing required for the well.

He had always had the utmost confidence in the stability of that company and its undertaking, which was an industrial and not a speculative proposition. It only wanted money and careful development to make it a great success. Mr. Sutherland concluded by referring to the Moore territory, and stating that in drilling there the main point was that the cost of obtaining the oil worked out at about 26 cents per barrel, as against three and even four times that amount in the older properties. He would be in Canada next spring, and would again make a careful inspection of the properties.

The resolution adopting the report and balance sheet was then unanimously agreed to, and on the motion of Mr. Moss, Mr. E. L. Bentley and Mr. R. D. Noble were re-elected upon the directorate, the resolution being seconded by Mr. HUNTER.

In returning thanks for Mr. Noble and himself, Mr. BENTLEY said he was much obliged for the renewed confidence of the shareholders; he could only say that he was on the spot in London, and he did everything he possibly could to promote the interests of the company, and to see they got 20 shillings for every £1 spent. He was exceedingly anxious that everything should be done to make the new debenture issue a complete success, because there was no doubt it would revolutionise the whole company, both as regarded the preference and the ordinary shareholders, and, what was more, the new debenture money would not be appropriated in paying off heavy debts (for there was no oil company with less debts than they had), but the money would be put into the ground so that the debenture holders would have the additional security created by the investment of that money, consequently they would have treble the security for the issue. As regarded Moore, it would interest them to know the production of their wells there, and the figures he would give referred to last September, that is after the initial pressure had subsided. When they remembered that in Canada a well producing five barrels per month was looked upon as a paying proposition, it would be seen how profitably their Moore wells were being worked. The September production of some of these wells was 45 barrels, 30, 25, 45, 32, 40, 60, 60 and many 12 and 15 barrels each, so he thought they would agree with him that the money was well invested there. With reference to boring to the greater depth, he should prefer that they should not attempt that until they found that the return from their existing wells was shewing serious diminution. Those wells, he added, were at present giving such excellent results that he did not think they had cause to fear abnormal diminution. Therefore, he thought they should expend the money given them by the additional issue of debenture in the way they had in the past, and he hoped with no less satisfactory results.

The auditors were re-elected, and a vote of thanks to the Chairman concluded the meeting.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended 27th October was 251,000 poods, or 4,046 tons; and for the week ended 3rd November 232,000 poods or 3,740 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended October 28th was 254,000 poods, or 4,095 tons; and for the week ended 4th November, 258,000 tons, or 4,160 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 28th October was 129,680 poods, or 2,091 tons; and for the week ended 4th November, 112,090 poods, or 1,807 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 28th October was 113,379 poods, or 1,828 tons; and for the week ended 4th November was 127,719 poods, or 2,059 tons.

RUSSIAN AND ROUMANIAN NOTES.

A GERMAN SYNDICATE disposing of a capital of 400,000 marks, is about to start drilling on a concession acquired at Bustenari-Calinet.

INCREASE OF CAPITAL.—The Central Tcheleken Petroleum Co. has received the permission of the Russian Government to increase the capital of the company from 500,000 to 1,000,000 roubles.

FORTHCOMING COMPANY MEETINGS.—General meetings are called of the Romano-American Co. for November 10th (o.s.), of the Rumeensche Petroleum Maatschappij for November 5th (o.s.), and of the Ialomitza Co. for November 18th (o.s.)

A NEW COMPANY has been formed in Russia under the title of "Russian Sakhalin Petroleum Co.", with a capital of 3,000,000 roubles. The objects are to acquire and develop petroliferous lands in the Russian part of the island of Sakhalin, and to refine and deal in petroleum products. The founder is Mr. S. A. Illarionoff.

WHEN IN ROME, ETC.—The *Moniteur du Petrole Roumain* is informed that the Romano-American Co., being dissatisfied with the results hitherto achieved by them in developing the Roumanian oil fields, have decided to send back their American boremasters and employ Roumanian drillers, and to also adopt the system and methods used by other firms in Roumania.

ACTIVITY IN ROUMANIA.—Great activity continues in Roumania in the acquisition of petroliferous lands. The Deutsche Bank in particular are actively taking up concessions as reserves for the future, and the same policy is pursued by the Regatul Roman Co. It is further reported that the Internationale Bohrgesellschaft intend to acquire a direct interest in the Roumanian oil fields apart from their interest in the Regatul Roman Co.

BATOU M TRADE.—The latest reports from Batoum shew that the shortage of oils, particularly of kerosene, is felt there very keenly. Even the largest firms are getting their supplies in much reduced proportions. This chiefly affects the exports of bulk oil to European markets, the case oil exports being scarcely affected. They continue fairly brisk and yield good profits to the exporters. There has been lately a great drop in shipments to England, as the prices offered by English buyers do not accord with the present prices at Baku and the high railway rate.

CANCELLED.—The Mines Office of the Caucasus has cancelled the concession granted to M. Schumader on plot No. 23 on Holy Island, in the Caspian Sea, owing to his failure to start exploitation in the prescribed time limit.

THE NEFT Co. of Baku have acquired from Mr. A. E. Bresinsky, plot No. 170 at Saboonchi, of an area of 1.35 acres, which the latter in his turn held on lease from the Minerva Co. for a term of 8 years with the right of renewal for a further term of 12 years.

THE STEAUA ROMANA.—A general meeting of the Steaua Romana was called for the 13th November (o.s.), in order to pass the report and balance sheet for the year ended 30th April, 1906. The balance sheet shews a net profit on the year's operations of 1,486,055 francs.

ROUMANIAN CRUDE OIL PRICES.—The price of crude oil in Roumania continues to rise. The lack of crude oil is keenly felt. No large deals are taking place, but small quantities are sold at 40 francs a ton, a price hitherto unknown in the Roumanian petroleum industry.

TO ECONOMISE IN FUEL.—In view of the high prices ruling for crude oil, Roumanian producers are again considering means of economising the oil used as fuel at the oil fields. Some firms propose to make use for this purpose of the gases issuing from the boreholes, whilst others contemplate burning residuals.

OIL PRICES ADVANCE.—At the last meeting of the members of the Roumanian petroleum refiners' cartel it was resolved to advance the price of illuminating oil for home consumption from 120 to 130 francs per ton. This advance has caused much dissatisfaction among the consuming public. The price of illuminating oil for export has risen to 85 francs per ton.

LIQUID FUEL CONTRACTS.—Contracts were invited by the Moscow-Jaroslav-Archangel Railway for the supply of 4,300,000 poods of liquid fuel, of which part to be delivered during next year's navigation, and part by rail during the winter of 1907-8. Tenders were submitted for only 1,000,000 poods to be delivered during navigation. There were no tenders for winter delivery. The following contracts were given out—to Nobel, 500,000 poods at 36.9 copecs; to Mazout Co., 500,000 poods at 36.9 copecs, and to Assadulaeff, 1,000,000 poods at 36.8 copecs per pood. Contracting for the remaining quantity has been postponed indefinitely.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR APRIL AND MAY, 1906 (in poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

Submitted to Distillation.			Products Received.					
		Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.
April	..	29,282,226	63,257	29,345,483	7,393,132	20,148,949	1,078,053	725,349
May	..	32,382,256	99,641	32,481,897	7,289,601	23,162,017	1,078,415	951,864

Refining

Submitted to Refining.			Refined Products Obtained.			Chemicals used.	
		Kerosene.	Other Distillates.	Total.	Kerosene.	Other Products.	Loss in Refining.
April	..	7,214,046	103,434	7,307,540	7,039,159	86,976	185,405
May	..	6,982,783	45,141	7,027,914	6,809,268	38,870	179,776

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

		Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
April	..	1,024,639	152,951	41,637	872,512	404,538	413,933	22,722	288,403	555,492
May	..	1,329,292	188,043	61,545	1,651,799	591,304	575,727	52,945	45,047	610,916

Refined Products Received.

		Spindle Oil.	Machine Oil.	Cylinder Oil.	Loss in Refining.	Chemicals used.	
						Acid.	Soda.
April	..	55,568	1,140,570	17,478	128,973	39,218	5,024
May	..	227,292	1,083,926	69,744	153,951	42,184	5,836

The output of benzine distillates amounted to 60,656 poods in May, against 51,340 poods in April. The output of refined benzine was: 23,195 poods in May, against 25,367 poods in April.

THE ONTARIO LANDS AND OIL COMPANY.

The annual meeting of the shareholders of the Ontario Lands and Oil Co. was held yesterday (Friday) afternoon.

The report for the year ended June 30th last, which was submitted to the meeting, stated that during the year 499 wells were worked, a decline of seven wells, the production being 14,630 barrels of oil, a reduction of 713 barrels, the average price realised being \$1.85, as against \$1.92 for the preceding year. The falling off in production had latterly been less marked than for several previous years, and the average yield per well was very little below last year's figures. Several changes in the method of working had been introduced, which had resulted in a satisfactory reduction of the cost of raising the oil, and consequently improved the small margin of profit earned. The current year should, it was anticipated, benefit from economies in a larger degree than the past, though it had to be remembered the ultimate result depended on two factors quite beyond the board's control—namely, production and price. The discoveries of oil in the neighbourhood of Petrolia, referred to in the last two reports had proved disappointing. More recently important strikes had been made at Tilbury, a place some distance to the south of Petrolia. The balance to credit of profit and loss account was £893, which, added to £103 brought forward from last year, made a total of £997, out of which the directors recommend a dividend of 1½ per cent. on the preference shares, less income-tax, carrying forward £97.

BATOUM PETROLEUM SHIPMENTS.

The shipments of petroleum products from Batoum during the week ended October 14th (o.s.) were as follows (poods):—

	Illuminating oil.		Other products.	
	1905.	1906.	1905.	1906.
To Europe	221,000	—	—	1,000
To the East	20,000	294,000	2,000	1,000
To Russian Ports	—	1,000	5,000	12,000
From Jan. 1st to Oct. 14th:—				
To Europe ..	17,752,000	10,169,000	7,471,000	6,340,000
To the East ..	9,196,000	5,627,000	312,000	47,000
To Russian Ports	2,334,000	2,367,000	200,000	200,000

LATEST INFORMATION FROM GROSNY.

The council of the Grosny Petroleum Association, in spite of the resolution passed at the last meeting of the association, is not compiling and publishing any statistics, so that no definite data are to hand of the production since the beginning of the year. Lately the production of the Grosny oil fields has been on the increase, thanks to the resumption of activity by the spouter on plot No. 22, and also an increase in yield by the spouter from well No. 38 on the Yermoloff plot of the Akhverdoff Co., both of which first became active in February, 1902. In the vicinity of the last named well drilling is now being completed of well No. 77; the result of which is awaited with much interest. When the three wells on plot No. 39 of the Kasbeck Syndicate began to be exploited well No. 78 on the Akhverdoff Co.'s plot No. 25 dried up. On plot No. 39 two new wells are being drilled, whilst the three old ones are yielding about 7,000 poods of oil per day. The adjoining plot No. 40, bought by the Spies Petroleum Co., is being actively equipped for exploitation. In an old well the water is being shut off, another is being drilled, whilst preparations are made for laying down a third well. Generally speaking the central part of the oil fields is assuming an air of greater activity.

The Glouchkoff concession, a plot of 270 acres of the best petroliferous land in Grosny, which has been lying idle for many years, has now been revoked, and the land split up into 10 plots, which will be leased out by auction, and this is expected to give a further impetus to the development of the Grosny petroleum industry, but nothing definite is known yet regarding the date of these auctions.

The Standard Russè are concentrating their attention on plot No. 36 on the extreme west of the oil field. The North Caucasian Oil Fields, Ltd., have now a production of about 4,500 poods per day.

BAKU PETROLEUM PRODUCTION.

The production of crude oil at the Baku oil fields during the first 15 days of October (o.s.) amounted to 20,076,000 poods.

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The American Oil Market.

New York, Week ended Oct. 27th.

The reports from the older producing sections during the past week have been somewhat meagre, and the results have been even more unsatisfactory than during the preceding weeks. The percentage of dry holes appears to be increasing, while very few good wells shewing more than average production have been brought in. One notable strike has been reported from the oil field near Franklin, Pa., says the *Oil, Paint and Drug Reporter*, and how this particular location has escaped so long appears to be a mystery. It is not expected, however, that the well will keep up the entire length of time, as a dozen or more wells in the immediate vicinity do not average more than about one-half barrel per day, but they have been pumped. Most of the wells reported from other sections are small pumpers, small even for the fields to which they belong, and the prospects are that with the approach of inclement weather the well operations will be restricted still further. In the Mid-Continent field the only feature of interest is the increase in shipments. In Texas the conditions remain the same.

REFINED AND PRODUCTS.—The demand for refined for export has been fairly active during the last week, and prospects are favourable for the continuance of a good movement. There is no change abroad, though in Russia it is claimed progress is steady and no apprehension is felt of further labour troubles, and consequently some of the producers and refiners are sanguine of an early resumption of shipments to foreign markets. The engagements during the past week exceeded 200,000 barrels.

The price for barrelled oil for export has remained steady at 7.50c. for New York loading, and at 7.45c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are steady at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel. Home trade lots have been in good request and are firm on the basis of 10c. at 150 degrees water white from tanks, and 13c. in barrels.

Cases for export have been in active request, and sales of over 500,000 are reported. The price of plain tops has been steady at 10c. Freight rates are firm.

Crude for export has been in fair request, and sales of about 30,000 barrels are reported. Pennsylvania crude is quoted at 7.50c. in barrels.

Naphthas have ruled firm. For export, sales of 10,000 barrels have been reported.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		Oct. 20, 1906.	Oct. 27, 1906.
National Tran. Certificates	per bbl.	\$1.58@1.59	\$1.58@1.59
Pennsylvania crude in bbls.	per gal.	7.60	7.60
Pennsylvania crude in bulk	.. ..	4.50	4.50
Residuum, bbls. for export	.. ..	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were;—

		Week ended	
		Oct. 27, 1905.	Oct. 27, 1906.
Tiona .. ..	.. ..	1.71	1.68
Pennsylvania .. ..	.. ..	1.61	1.58
North Lima .. ..	.. ..	0.96	0.90
South Lima .. ..	.. ..	0.91	0.85
Indiana .. ..	.. ..	0.91	0.85
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.36	1.30

REFINED—FOR EXPORT.

		Week ended	
		Oct. 20, 1906.	Oct. 27, 1906.
Cargo Lots for export..	per gal. ..	7.50	7.50
In bulk .. ..	.. ..	4.40	4.40
Philadelphia loading ..	.. ..	7.45	7.45

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Oct. 20, 1906.	Oct. 27, 1906.
3,000 to 10,000..	.. ..	10.05	10.15
1,000 to 3,000..	.. ..	10.20	10.20

REFINED—JOBBER LOTS.

		Week ended	
		Oct. 20, 1906.	Oct. 27, 1906.
120 fire test, S.W. ..	per gal. ..	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13	13
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	12½@13½	12½@13½

NAPHTHA AND GASOLENE.

		Week ended	
		Oct. 20, 1906.	Oct. 27, 1906.
Naphtha, crude, car. lots, 68 @ 72 deg.		15.00	15.00
Gasolene, 86 deg. ..	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from Oct. 19th to Oct. 25th were:—Oct. 19th, 104,727; Oct. 20th and 21st, 167,798; Oct. 22nd, 86,659; Oct. 23rd, 98,436; Oct. 24th, 128,682; and Oct. 25th, 122,165. For the month of September, 3,110,306.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—154,581; 284,420; 153,998; 133,927; 168,203; 183,180. For the month of Sept., 4,506,448.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended October 26th and from Jan. 1st, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	239,200	10,224,800	10,389,600
Refined, cases	535,000	11,731,000	17,532,000
Crude, barrels and bulk..	29,900	1,351,600	1,013,000
Crude, cases	—	325,000	199,000
Naphtha, barrels.. ..	11,100	268,900	492,300
Residuum, barrels	66,700	646,900	830,500
Lubricating, barrels ..	—	218,200	148,000
Total, barrels cde. eq. ..	580,516	20,730,152	22,303,870

CLEARANCES FOR THE WEEK.

During the week ended Oct. 26th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	11,678,160	377,444,894	412,261,606
Crude	—	232,900	929,594
Naphtha	189,250	14,251,484	11,013,433
Residuum	480,000	4,099,600	3,294,915

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Oct. 26th ..	15,570,880
Total from New York, from Jan. 1st, 1906 ..	504,176,094
Same period last year	551,211,737
Decrease	47,035,643
From United States, week ended Oct. 26th..	27,960,103
Total from United States, since Jan. 1st, 1906	992,187,708
Same period last year	1,045,454,991
Decrease	53,267,283

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The "Review" Shipping List.

NOVEMBER 8, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE.	Philadelphia	Sables d'Olonne	Arr. Oct. 23	IMPERIAL	—	—	Tr. on Lakes btn. U.S. and Can.
ALCHYMIST	Terneuse ..	Bayonne....	Arr. Oct. 23	JOANNIS COUTZIS	Ismailia	Piræus	L. Constant'ple, Nov. 1
AMERICAN	New York ..	Antwerp....	Arr. Oct. 2	J. B. AUG. KESSLER	Philadelphia	Calcutta	Arr Port Said, Oct. 8
APPALACHEE	San Francisco	Shanghai ..	L. Oct. 19	JAMES BRAND	Pauillac	Philadelphia	Arr. Barry, Nov. 4
APSCHERON	Batoum	Venice.....	P. Constant'ple, Oct. 5	KURA	Port Talbot	New York ..	L. Oct. 29
ARAL	Philadelphia	Dover	P. Del. Break., Oct. 25	LA CAMPINE.....	Antwerp	Philadelphia	Arr. Oct. 29
ARAS.....	London	Tyne	L. Nov. 6	LA FLANDRE	Ghent	New York ..	Arr. Nov. 1
ARGYLL	Kahului	Port Harford	L. Oct. 16	LA HESBAYE.....	Antwerp	Philadelphia	P. Scilly, Oct. 23
ASTRAKHAN.....	Tyne	Philadelphia	L. Oct. 20	LA MADELEINE ..	Antwerp	Genoa	Arr. Oct. 18
AUGUST KORFF..	Hamburg ..	Philadelphia	P. Nantucket, Nov. 7	LA VIGUESA	Vigo.....	Philadelphia	L. Oct. 11
AUREOLE	Philadelphia	Rotterdam..	Arr. Nov. 6	LACKAWANNA	New York ..	Savona	P. Algiers, Oct. 30
AZOV.....	—	—	Trading on W.C. of South Amca.	LE COQ.....	Havre	Philadelphia	Arr. Oct. 25
BAKU STANDARD	Tyne	Ibrail	Arr. Nov. 1	LOUTSCH	—	—	Tr. btwn. Odessa & Novorossisk
BALAKANI.....	Dublin	Plymouth ..	L. Nov. 7	LUCERNA	Philadelphia	Bergen.....	Arr. Nov. 6
BATOUM	Tyne	Philadelphia	P. Dunnet Hd., Oct. 23	LUCIFER.....	Penarth	Philadelphia	P. Browhead, Oct. 23
BAYONNE	Hull	New York ..	Arr. Oct. 28	LUCIGEN	Philadelphia	Bremerhaven	Arr. Nov. 3
BEACON LIGHT..	Penarth	Cardiff	Arr. Nov. 5	LUCILINE	Tyne	Philadelphia	P. Butt of Lewis, Oct. 24
BEME	Rangoon ..	Kurrachee ..	L. Oct. 10	LUMEN.....	Tyne	Kustendje ..	P. Peniche, Oct. 29
BLOOMFIELD	Tyne	Philadelphia	Arr. Nov. 4	LUX	Kustendje ..	Cette	P. Constant'ple, Nov. 2
BORJOM	Batoum	Alexandria ..	Arr. Oct. 28	MAKKA VEI	—	—	Trading in Black Sea
BRILLIANT	New York ..	Landscrona..	L. Oct. 30	MANHATTAN	Messina	New York ..	Arr. Oct. 28
BROADMAYNE	Liverpool ..	Port Arthur (Texas)	L. Oct. 28	MANNHEIM	Tyne	New York ..	Arr. Nov. 7
BULLMOUTH	Yokohama ..	—	L. Nov. 1	MARGARETHA ..	Antwerp	Port Arthur (Texas)	L. Nov. 5
BULYSSES	Balekappan	London	Arr. Las Palmas, Nov. 2	MEXICAN PRINCE	Liverpool ..	Port Arthur (Texas)	Arr. Oct. 31
BURGERMEISTER	Philadelphia	Oxelosund ..	P. Del. Break, Oct. 18	MIRA	Batoum & Thameshaven	Newport....	Arr. Oct. 26
PETERSEN	Rouen	Kustendje ..	P. Constant'ple, Oct. 31	MUREX.....	Balekappan	Shanghai ..	Arr. Nov. 3
CADAGUA	San Francisco	Shanghai ..	Arr. Oct. 18	NARRAGANSETT..	London	New York ..	P. Prawle, Oct. 29
CALCUTTA (Br. bq.)	Balekappan	—	L. Oct. 31	NERITE	—	—	Tr. in China Seas
CARDIUM	Liverpool ..	Philadelphia	L. Oct. 31	NEW YORK	Southampton	New York ..	W. of Lizard, Nov. 4
CAUCASIAN	Amsterdam	Norfolk (Va.)	P. Beachy Head, Nov. 2	OCEAN	Amsterdam	Philadelphia	P. Lizard, Oct. 23
CHARLOIS	London	New York ..	Arr. Nov. 2	ORANJE PRINCE..	Flushing....	Tyne	Arr. Nov. 4
CHESAPEAKE	Antwerp	New York ..	P. Lizard, Oct. 29	ORIFLAMME	Philadelphia	Bouc	L. Oct. 26
CHESTER	—	—	Trading on W.C. of South Amca.	OSCEOLA	Newport Nws.	Wilmington (N.C.)	Arr. Oct. 11
CIRCASIAN PRINCE	Balekappan	Batavia	Arr. Nov. 4	OTTAWA	Philadelphia	Tampico....	P. Del. Break., Oct. 25
CLAM	Port Natal ..	—	L. Oct. 19	OURAL	Port Arthur (Texas)	Rouen and Antwerp	L. Newport News, Oct. 27
COWRIE	Penarth	Philadelphia	L. Nov. 2	PALEMBANG	—	—	Tr. Sts. Settlem'ts & China Seas
CYMBELINE	Hamburg ..	Batoum	P. Constant'ple, Oct. 31	PAULA	Philadelphia	Danzig	L. Nov. 2
CZAR NICOLAI II.	Tyne	Batoum	P. Constant'ple, Nov. 7	PECTAN	Port Arthur (Texas)	—	L. Oct. 28
DAGHESTAN.....	San Francisco	Hong Kong	Arr. Nov. 7	PENNOIL	Tyne	Philadelphia	L. Oct. 30
DAKOTAH	New York ..	Manchester	Arr. Nov. 5	PERLAK	Singapore ..	Samboe	L. Sept. 25
DELAWARE	New York ..	Flushing....	In Downs, Nov. 3	PHOEBUS	New York ..	& Palembang	L. Nov. 2
DEUTSCHLAND ..	Stettin.....	New York ..	P. Dunnet Head, Oct. 31	PINNA	Hamburg ..	Hamburg ..	L. Nov. 2
DIAMANT	Samboe	—	L. Port Natal, Oct. 16	POTOMAC	New York ..	London	Arr. Nov. 2
ELAX.....	New York ..	Gothenburg	L. Oct. 27	PROMETHEUS	Rotterdam ..	Sunderland	Arr. Tyne, Nov. 7
ELISE MARIE	New York ..	Konigsberg	L. Oct. 20	PRUDENTIA	Wilmington	New York ..	Off I. of W., Nov. 4
ENERGIE	Philadelphia	Hamburg ..	L. Oct. 29	RION	Tyne	Port Arthur (Texas)	L. Oct. 23
ERIVAN	Philadelphia	Manchester	Arr. Nov. 2	ROCK LIGHT	Kustendje ..	Constant'ple	L. Nov. 1
EUPLECTELA	Venice.....	Novorossisk	Arr. Nov. 4	ROSSIJA	Novorossisk and Trieste	Dover	L. Constant'ple, Oct. 31
EXCELSIOR	—	—	Coasting Peru	ROTTERDAM	New York ..	Hamburg ..	Arr. Nov. 4
EZIO	Philadelphia	Alicante	Arr. Nov. 2	RUSSIAN PRINCE	Liverpool ..	Antwerp	Arr. Nov. 7
FRANCE MARIE ..	Hamburg ..	Philadelphia	P. Dunnet Head, Oct. 27	SALAHADJI	—	Batoum	L. Nov. 4
GEESTEMUNDE ..	Philadelphia	London	Arr. Nov. 5	SEMINOLE.....	San Francisco	Calcutta	Tr. Sts. Settlem'ts and Java Seas
GENESSE	Kustendje ..	Dover	P. Gibraltar, Nov. 6				Arr. Madras, Nov. 2
GEORGIAN PRINCE	Cardiff	Aroe Bay ..	L. Nov. 51				
GOLDMOUTH	Hamburg ..	Philadelphia	P. Dunnet Head, Nov. 4				
GUTHIEL	Mariupol ..	Smyrna	Arr. Oct. 30				
HAINAUT (Dch.shp.)	Kustendje ..	London	P. Gibraltar, Nov. 6				
HARRY WADSWORTH	Philadelphia	Nordenhamn	L. Nov. 2				
HELIOS	Middlesbro'	Batoum	P. Constant'ple, Oct. 30				
HOTHAM NEWTON	San Francisco	Muroran	L. Sept. 18				
HOUSATONIC							

Vessel.	From.	For.	Latest Date and Position.
SILVERLIP	Barrow	Cardiff	Arr. Oct. 26
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Manchester	Philadelphia	Arr. Nov. 3
SOPHIE	Kustendje ..	France	P. Constant'ple. Oct. 26
SPONDILUS	Tyne	Soesoe.....	Arr. Nov. 3.
STANDARD	Philadelphia	Stockholm ..	L. Oct. 31
STROMBUS	Singapore ..	—	L. Oct. 24
SURAM	New York ..	Belfast.....	Arr. St. Johns (N.F.), Nov 1
SUWANEE	London	Kustendje ..	P. Peniche, Oct. 25
SVIET	Batoum	Odessa	L. Oct. 20
TELENA	Singapore ..	Channel	P. Las Palmas, Nov. 1
TEREK.....	London	New York ..	Arr. Oct. 26
TIFLIS.....	Antwerp	Batoum	L. Nov. 7
TIOGA	Flushing....	New Orleans	Arr. Nov. 4
TONAWANDA	San Francisco	Canton	L. Oct. 20
TROCAS	—	—	Arr. Singapore, Nov. 8
TURBO	Cardiff	Philadelphia	P. Barry Island, Nov. 4
TUSCARORA ...	Yokohama ..	San Francisco	L. Nov. 1
TWINGONE	Rangoon....	Madras	L. Oct. 20
VEDRA	Manchester	Philadelphia	P. Fastnet, Oct. 29
VILLE DE DIEPPE	—	—	Arr. Havre, Oct. 31
VILLE DE DOUAI	Ibrail	Campana ..	L. Buenos Ayres, Oct. 4
VOLUTE	Balekappan	Shanghai ..	Ashore Hankow, Nov. 5
WEEHAWKEN	Philadelphia	Barrow	Arr. Barrow, Nov. 3
WILLKOMMEN ..	Danzig	Philadelphia	P. Butt of Lewis, Nov. 1
WINNEBAGO (late Kinsman)	San Francisco	Hankow	Arr. Oct. 3

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

November 9th, 1906.

The price of Refined Petroleum in barrels has been put down $\frac{1}{4}$ d. this week, but as empty barrels themselves have also been put down $\frac{1}{4}$ d. it leaves the price of the bulk oil unchanged.

The latest quotations are:—Russian and Roumanian, $5\frac{7}{8}$ d.; American, $6\frac{1}{4}$ d.; Water White, $7\frac{1}{4}$ d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £7 to £9 10s.
American dark cylinder, from £7 2s. 6d.
American filtered cylinder, from £11.
No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine has been fluctuating but slightly during the week, and is fairly firm, although there is not much business doing.

The latest quotations for Spot are 48s. 9d.; for December, 49s.; and for the first four months of next year, 50s.

LIVERPOOL OIL MARKET.

November 8th.

Refined oils are quiet, and sellers now quote $5\frac{7}{8}$ d. for Russian, Galician or Roumanian; and $6\frac{3}{8}$ d. to $7\frac{7}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, November 8th.

Refined, in cases, is lower at 10'00; Standard White, 7'50; Credit balances, 1'58c.

PHILADELPHIA, November 8th.

Standard White is still quoted at 7'45.

RUSSIA.

BAKU, November 5th.

The Baku oil market is quiet, and prices shew a tendency to decline. Light crude oil, spot, 22-23 copecs per pood, future delivery $20\frac{1}{2}$ to $21\frac{1}{2}$ copecs; residuals, spot 23 copecs.

BELGIUM.

ANTWERP, November 2nd.

The petroleum market is unchanged. Price of Standard White, spot, $19\frac{1}{2}$ francs per 100 kilos.; and two last months of the year 20 francs.

FRANCE.

PARIS, November 2nd.

Illuminating oil is quoted in bulk, in whole tank waggons, 20'50 francs per hectolitre; spirit, 25'25 francs per hectolitre. Special white oil, 28'50 francs per hectolitre.

GERMANY.

HAMBURG, November 2nd.

The kerosene market is firm. The price of American Standard White is 6'80 marks per 50 kilos, Russian, 6'55 marks.

ROUMANIA.

October 28th.

Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs. ... 4'20-4'30

Refined oil, exclusive of taxes ... 13'00- —

Motor benzine, including taxes ... 16'00-18'00

Benzine, doubly refined ... 24'00-25'00

Residuals in tank waggons, at refinery ... 3'20-3'30

Paraffin ... 120'00-125'00

Lubricating Oils—

Agricultural... 30-32

Prime ... 35-37

Extra ... 40-42

Royal ... 45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilo.

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs. 8'50- —

Benzine, sp. gr. 0'710-0'715 ... 15'50-16'50

„ sp. gr. 0'720-0'725 ... 14'50-15'50

„ sp. gr. 0'730-0'740 ... 11'50-12'50

„ sp. gr. 0'745-0'755 ... 7'50- 8'50

INDIA.

BOMBAY, October 29th.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. Rs. 6 0 2

„ Chester, 125 deg. 4 8 2

„ Monkey Brand, 125 deg. 4 2 2

„ Bulk, 125 deg. (in local made tins).. .. 3 10 0

„ 125 deg. (8 Imperial gallons) 3 0 0

„ "White Camelia" brand, 125 deg. .. No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair 3 2 0

Borneo oils, in tins, per pair 3 2 0

Sumatra "Rising Sun," bulk, per unit 3 0 0

„ „ tins, per pair 3 10 0

Silverlight cases, per case 4 8 0

Russian, "Anchor," cases 4 14 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for .
this Journal by . . .
the Custom House. .*

FOR THE WEEK ENDED OCTOBER 29TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Oct.	LONDON—			
23	Anglo-American Oil Co. (Narragansett)	Lub.	268,160	New York
23	"	Lamp	2,708,410	"
24	Thames Steam Tug Co.	Lub.	2,300	S. Petersburg
24	T. H. Lee	Lub.Gr.	2,640	Hamburg
25	G. and H. Green ..	Lub.	3,330	New York
25	Anglo-American Oil Co.	"	36,000	"
25	R. Park and Co. ..	"	120	Marseilles
26	G. W. Sheldon and Co.	Lub.Gr.	200	Antwerp
26	J. Spurling	Lub.	160	New York
27	General Petroleum Co. (Euplectela)	Lamp	888,000	Philadel.
27	T. H. Lee	Lub. Gr.	390	Hamburg
27	London Oil Storage Co.	Lub.	3,730	"
29	G. W. Sheldon and Co.	"	1,200	New York
29	Scott's Wharf	"	5,000	"
29	Mordaunt Bros. ..	"	2,500	"
29	"	"	18,000	"
29	London and India Dock Co.	"	620	Hamburg
	LIVERPOOL—			
23	C. C. Wakefield ..	Lub.Gr.	1,260	Antwerp
23	Liverpool Warehousing Co.	M.Lub.	320	New York
26	Meade-King, Robinson & Co.	"	4,800	Baltimore
26	"	"	22,400	Philadel.
26	Crew, Levick and Co.	"	9,660	"
26	E. Harrison and Co.	"	20,500	"
26	W. B. Dick and Co...	"	22,900	"
26	"	"	8,200	New York
29	A. Hopps and Sons ..	"	2,540	"
29	G. B. Taylor	"	98,480	"
29	Liverpool Storage Co.	"	5,760	"
29	Valvoline Oil Co. ..	"	6,770	"
29	E. H. Kellogg and Co.	"	2,000	"
29	Worthington and Boler	"	4,400	Philadel.
	BRISTOL—			
25	Pickfords	"	370	Hamburg
27	W. Smith and Co. ..	"	4,960	New York
	CARDIFF—			
23	Homelight Oil Co. .. (Beacon Light)	Lamp	1,033,600	Batoum
	GRIMSBY—			
23	J. Sutcliffe and Son ..	Lub.	430	Antwerp
23	"	"	600	Hamburg
	HULL—			
23	Anglo-American Oil Co. ..	"	120,950	New York
23	Consolidated Pet. Co. (Aras)	Lamp	825,000	"
23	Wilsons and N.E. Railway Shipping Co.	Lub.	4,800	"
24	"	"	1,240	Antwerp
24	"	"	2,920	"
26	"	"	480	S. Petersburg
26	"	"	740	Hamburg

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Oct.				
26	Meade-King, Robinson & Co.	Naph.	34,000	Rotterdam
26	Hull & Netherlands S.S. Co.	Tar Oil	2,400	"
26	"	"	1,500	"
29	"	"	2,160	"
	MANCHESTER—			
23	W. Hodgson and Co.	Lub.	1,070	Hamburg
23	J. T. Fletcher and Co.	"	3,740	Antwerp
25	Worthington and Boler	"	2,010	Philadel.
26	Geo. B. Taylor	"	50,680	"
	NEWCASTLE—			
26	Tyne-Tees Steamship Co. ..	"	880	Antwerp
	GLASGOW—			
24	Anchor Line	"	59,990	New York
24	J. and A. Allan	"	38,200	Philadel.
25	Clyde Shipping Co. ..	Lub.Gr.	110	Antwerp
	GRANGEMOUTH—			
23	J. Currie and Co. ..	Tar Oil	400	Hamburg
	LEITH—			
23	G. Gibson and Co. ...	Lub.	200	Antwerp
23	J. Cormack and Co.	"	4,600	Riga
23	Henderson and McIntosh ..	"	23,320	Philadel.
25	W. Graham-Yooll and Co.	Lamp	2,180	Hamburg
25	"	"	2,180	"
25	G. Gibson and Co. ..	Lub.	480	Antwerp
25	"	"	240	"
Total for the Week			6,357,280	

FOR THE WEEK ENDING NOVEMBER 5TH 1906—

Oct.	LONDON—			
30	G. W. Sheldon and Co. ..	Lub.	480	Antwerp
30	J. Harrison	"	320	"
30	Bowring Petroleum Co. ..	"	200	"
30	"	"	4,670	Philadel.
30	Fielder, Hickman and Co. ..	"	2,800	New York
30	Beck and Pollitzer	"	1,360	"
30	F. W. Titchener	"	94,000	"
31	General Pet. Co. (Pinna) ..	Lamp	476,000	Pt. Arthur
Nov.				
1	H. Johnson and Son ..	Lub.	360	Treport
1	G. W. Sheldon and Co. ..	Lub.Gr.	200	Antwerp
2	R. Park and Co.	Lub.	260	Treport
2	P. J. Johnson	"	4,000	Trieste
2	Consolid. Pet. Co. (Aras) ..	Lamp	1,269,000	Hamburg
6/10	J. W. Cook and Co. ..	Fuel	3,840	Rangoon
2	T. H. Lee	Lub.	590	Hamburg
2	J. L. Field and Co. ..	"	200	New York
3	C. Spurling	"	400	"
3	Anglo-American Oil Co. (Genesee)	Gas	998,020	Philadel.

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,



**Midland Works,
BIRMINGHAM.**

**BUILDERS OF
OIL & OTHER
TANK WAGONS,
And Every Description
of Rolling Stock
WITH WOOD OR STEEL
UNDERFRAMES.**

Anglo-American Oil Co., Ltd.,

SOLE IMPORTERS

Finest American Lamp Oils





WHITE ROSE   

. and .

 ROYAL DAYLIGHT.

Pratt's Motor Spirit

PACKED IN SEALED TWO GALLON CANS.

Universally used by all leading Motor
Manufacturers, Motorists, Railway and
Motor Bus Companies.    

IN USE AND FOR SALE EVERYWHERE.

— QUALITY TELLS. —

To Dealers only.

DATE	PORT AND IMPORTERS.	DESCRIPTION.	No. OF GALLS.	PORT WHENCE.
Nov.				
3	Mordaunt Bros.	Lub.	29,700	Philadel.
3	W. Balchin	"	6,640	"
3	H. G. Record	"	6,480	"
3	A. Brown and Co.	"	10,000	"
3	"	"	2,000	Hamburg
3	London Oil Storage Co.	"	1,930	"
5	T. H. Lee	"	1,290	"
5	G. W. Sheldon and Co.	"	450	New York
5	Scott's Wharf	"	2,000	"
Oct.	LIVERPOOL—			
30	Evans, Sons, Leacher & Webb	Lub. Gr.	200	"
30	Crew, Levick and Co. ..	M. Colza	6,140	"
Nov.				
1	E. H. Kellogg and Co. ..	M. Lub.	4,000	"
1	Vacuum Oil Co.	"	8,800	"
1	Ismay, Imrie and Co. ..	"	140	"
1	Liverpool Storage Co. ..	"	4,800	"
1	"	"	98,400	Philadel.
1	George B. Taylor	"	28,720	"
1	"	"	920	New York
1	Pickford's, Ltd.	L. Paste	870	Hamburg
1	Dee Oil Co.	Lub.	240	"
2	Meade-King, Robinson & Co.	Resid.	4,000	Trieste
2	"	M. Lub.	4,800	Baltimore
2	"	"	89,740	Philadel.
2	Crew, Levick and Co. ..	"	21,330	"
2	W. B. Dick and Co. ..	"	11,800	"
1	Worthington and Boler ..	"	2,400	"
1	Midland Railway Co. ..	"	850	"
5	Geo. B. Taylor	"	600	New York
5	"	"	60,800	"
5	Liverpool Storage Co. ..	"	1,600	"
5	Anglo-American Oil Co. (Delaware)	Gas	402,460	"
5	W. Gibson and Co. ..	Lamp	2,050	Boston
	BARROW—			
5	Anglo-American Oil Co.	Naph.	456,530	Philadel.
Oct.	BRISTOL—			
30	H. R. James and Sons ..	Lub.	8,400	New York
Nov.				
1	"	"	4,960	"
1	W. Smith and Co. ..	"	39,800	"
1	"	Lamp	1,200	"
1	Anglo-Bosphorous Oil Co. ..	Lub.	2,000	Hamburg
Nov.	GRIMSBY—			
30	J. Sutcliffe and Son ..	"	360	"
Nov.				
1	"	"	540	Antwerp
Oct.	HULL—			
30	Consolid. Pet. Co. (Rion) ..	Lamp	825,000	Sulina

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	No. OF GALLS.	PORT WHENCE.
Nov.				
2	Wilsons and N.E. Railway Shipping Co.	Lub.	1,320	Antwerp
2	"	"	240	Ghent
2	"	"	4,000	New York
Oct.	MANCHESTER—			
30	George B. Taylor	"	2,400	Philadel.
30	Meade-King, Robinson & Co.	"	54,760	"
30	Manchester Liners	"	16,400	"
Nov.				
1	C. H. Morton and Son ..	"	3,440	"
1	Crew, Levick and Co. ..	"	4,230	"
2	Lampport and Holt ..	"	1,260	New York
	MIDDLESBRO'—			
1	J. J. Sutherland	"	1,480	Antwerp
Oct.	NEWCASTLE—			
30	Tyne-Tees S.S. Co. ..	"	450	Hamburg
Nov.	SOUTH SHIELDS—			
3	Consolidated Pet. Co. (Aras)	Lamp	442,820	New York
	DUNDEE—			
1	D. Alexander and Sons ..	Lub.	200	Hamburg
Oct.	GLASGOW—			
30	Anchor Line	M. Colza	10,000	New York
31	"	Lub.	54,430	"
31	Clyde Shipping Co. ..	"	200	Antwerp
	GRANGEMOUTH—			
30	J. Currie and Co.	"	1,000	Hamburg
Nov.				
1	W. Graham-Yooll and Co.	Lamp	2,000	"
Oct.	LEITH—			
30	J. Currie and Co.	Lub.	160	"
Nov.				
3	W. Graham-Yooll and Co. ..	Lamp	2,180	"
3	Henderson and McIntosh ..	Lub.	16,000	Philadel.
	BELFAST—			
3	Consolidated Petroleum Co. (Balakani)	Gas	435,200	"
	Total for Week	"	6,065,810	
	Total for the past Fortnight ..	"	12,423,090	
	Deduct to Correct—			
	LONDON—			
16/10	Anglo-American Oil Co. (Suwanee)	Naph.	701,900	Kustendje
16/10	"	Benzine	147,980	"
16/10	"	Naph.	18,000	"
16/10	"	"	719,900	"
16/10	"	Benzine	147,980	"

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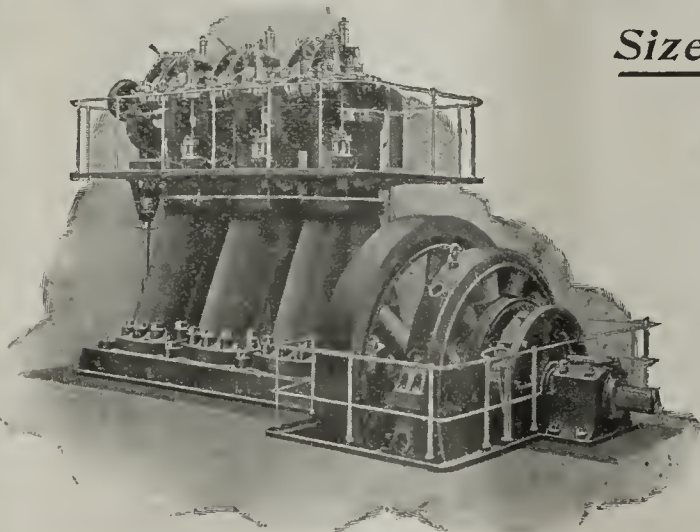
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

NOVEMBER 24TH, 1906.

No. 386.

Editorial Notes.

A perusal of the report of the first annual *Progress in Australia.* Commonwealth Oil Corporation, which appears elsewhere in this issue, must convince the most sceptical of the vast possibilities which lie before the company in that remote part of the world. The general manager of the corporation, as well as the board of directors, have always been most sanguine as to the ultimate success of the undertaking, but the progress recorded thus far exceeds the expectations of everyone.

In view of the energy now being exerted to turn the rich stores of shale on the corporation's property to good account, those interested in the petroleum industry will look to the Antipodes for big things.

Thanks to the efforts of the United *The Refining States Census Bureau,* a report has recently been prepared dealing with the *of Petroleum* use of chemicals in the refining *in the* petroleum in the various refineries in *United States.* the United States of America for the past year, and also shewing by way of comparison, the figures under the various headings for the year 1900. During last year, the whole of the United States refineries turned out products valued at \$175,005,320, as compared with a total value of the products received of \$123,929,384 for 1900. Last year there were 98 petroleum refineries in the States, as against 67 five years ago, while the capital invested in the various refineries last year was \$136,280,541, as compared with \$95,327,892 in 1900. These two latter figures, it should be mentioned, have no relation to the issues of stocks or shares, but embrace tangible assets only. The details which we publish on another page will, we feel sure, be carefully perused, for they bring down to solid facts all that has been said time after time of the progress of the American refining industry during recent years.

The boom in the Roumanian petroleum industry continues. The *The Boom in Roumania.* production of crude oil in that country, according to the official statistics which we publish elsewhere, amounted to the very substantial figure of 636,424 tons for the nine months of the year, as against 429,774 tons in the corresponding period of 1905, which represents an increase of about 50 per cent. Should this rate of increase be maintained, and under the favourable conditions now prevailing, there can scarcely be any doubt about it, then the total production for 1906 will be about 900,000 tons, or 30 per cent. more than the production of Galicia. In the export trade there has been a greater advance. The total exports for the first nine months of 1906 were 238,916 tons against 132,569 tons in the corresponding period of 1905,

an increase of 106,347 tons or 80 per cent. This increase, it should be noted, occurred entirely in refined products—illuminating oil and benzine. Moreover, the prices realised for the oils exported were far better than those obtained in 1905, and the increase in the total value of the exports will therefore be greater still. The prices of oils in Roumania are now most favourable for the development of petroleum production. Crude oil realises 41 francs per ton, which leaves a handsome profit to the producer. The great new refineries of the Vega Co. and the Romano-American Co., completed during the last year, and the enlarged refineries of the Steaua Romana and Aurora Companies require enormous quantities of crude oil to keep them fully employed, and to-day absorb the whole production. As a consequence of the healthy state of things which now prevails, transactions in petroliferous or presumably petroliferous lands are very numerous, and the leading companies are particularly active in taking up vast tracks of territory for future development. Thus everything goes to shew that Roumania is now experiencing a boom in its petroleum industry, which augurs well for the future.

The Japanese Government has a watchful *Japan's* eye upon its petroleum industry, and, in order *New* to infuse new life into it, a tariff wall has been *Move.* erected which will go far to give the petroleum refining branch an immediate impetus. Hitherto Japan's petroleum trade has been in a very stagnant state though the demands for the refined products have been yearly increasing. Consequently the imports of petroleum into that country have been in a very healthy state, though the home petroleum trade has experienced none too rosy times. But things are now to be altered, and a duty of 9 cents per gallon is stiff enough to damp the enthusiasm of any foreign importer who looks to Japan as a market.

With the advent of winter, *The American Fields* operations in the oil fields of America are on the wane, and the *in October.* record for October was in many respects far behind that of previous months. In fact, apart from the Illinois field, from which locality 80 per cent. of the month's new production came, there was something approaching a general cessation in oil field activity during October. As shewing the poor character of the ground now operated, the average yield of new production per well in the fields producing Pennsylvanian oil was only about seven barrels each as compared with an average of over eleven barrels for the preceding month. The Illinois fields still continue to be the centre of interest, and the older wells there are shewing splendid staying powers. Here in October, though the number of completed wells was 225 less than in the Pennsylvanian oil regions, the new production was over four times as large. In the Mid-Continent fields, the month shewed an unexpected

increase in both oil runs and shipments, the former for the month averaging over 60,000 barrels per day, which is about 13,000 barrels more than the September figures. This fact alone shews at what a remarkable rate the fields of Kansas and Indian Territory are going ahead, in spite of the desire which is general that the new production shall be kept as low as possible.

LONDON OIL SHARE MARKET.

FRIDAY, NOVEMBER 23RD.

Dealing has been on a very small scale during the past fortnight in Oil Share issues, and where changes occur in prices they are characterised by a somewhat irregular tendency.

On Saturday, November 10th, the following list of quotations were current:—

Anglo-Russian Oil $0\frac{1}{8}$, Assam Oil $\frac{5}{8}$ - $\frac{7}{8}$, Baku Ordinary 3s. 9d. to 4s. 3d., Preference 6s. 6d. to 7s. 6d., Bibi-Eybats $\frac{5}{16}$ - $\frac{7}{16}$, Debentures 84-89, Californian Oilfields $5\frac{1}{2}$ -6, Refineries $1\frac{1}{16}$ - $1\frac{3}{16}$, European Petroleum $\frac{1}{16}$ - $\frac{3}{16}$, Debentures 79-84, Schibaieff Ordinary 7s. to 8s., Preference $2\frac{1}{4}$ - $2\frac{3}{4}$, Russian Ordinary 11s. 3d. to 12s. 3d., Preference 11s. to 11s. 6d.; Debentures, 90-93, Spies $\frac{1}{32}$ - $\frac{1}{16}$, Shell Transport Ordinary 29s. 6d. to 30s. 6d. and Preference $9\frac{1}{4}$ - $9\frac{3}{4}$.

The first alteration from these figures was on the following Wednesday, when Baku Preference fell 6d. per share to 6s. to 7s., and on Thursday the weakness was accentuated, Assam Oil losing $\frac{1}{16}$ at $\frac{9}{16}$ - $\frac{11}{16}$, and California Oilfields $\frac{1}{4}$ at $5\frac{1}{4}$ - $5\frac{3}{4}$. On the other hand Spies gained $\frac{1}{32}$ at $\frac{9}{16}$ - $\frac{1}{2}$, while with Saturday's dealings a few selling orders reduced Shell Transport Preference $\frac{1}{4}$ to 9 to $9\frac{1}{2}$.

This week prices have been practically stationary, the only changes to record occurring in connection with Spies, which have been in some little request, and after rising to $\frac{1}{32}$ - $\frac{1}{16}$ on Wednesday reached $\frac{1}{2}$ - $\frac{9}{16}$ on Thursday, closing at best.

The mid-November account commenced on the 12th inst, when rates for Contango were very irregular, and fluctuated considerably.

The general charge for the continuation of Oil Shares being from about 7 per cent. to 8 per cent. and 8 per cent. to 9 per cent.

A comparison of making up prices shew about equal alterations, Baku Ordinary rising 9d. per share at 4s., Preference 6d. at 7s., Californian Oilfields gaining $\frac{1}{8}$ at $5\frac{5}{8}$, and Spies 3d. at 9s., while Anglo-Russian fell 3d. at 1s., Schibaieff Ordinary 6d. at $\frac{3}{8}$, Preference $\frac{1}{4}$ at $2\frac{1}{2}$, Russian Preference 9d. at 11s. 3d., and Shell Transport Ordinary 6d. at 29s. 9d. Russian Ordinary at 11s. 6d. marked no change.

CONDITIONS IN THE GALICIAN PETROLEUM INDUSTRY.

The Galician petroleum industry, according to reports from Boryslaw, is settling down to normal conditions. Prices of crude oil have gone up, and the Vacuum Oil Co. is paying as much as 32 francs per ton. Messrs. Steczkowski, Roseneck and Gottfried have visited Drohobycz with a view to secure more adherents among the producers to the recently concluded agreement with the Petrolea Co. At the Drohobycz Bank a sum of 500,000 francs had been deposited for the purpose of paying out to the producers the advances of 25 francs per ton stipulated in the agreement. This has produced an excellent impression among the producers.

THE "REVIEW" SUMMARY.

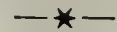


News in a Nutshell.

To give an impetus to her home refining industry, Japan has now placed a duty of nine cents per gallon upon imported refined oils.



THE Batoum petroleum export trade still keeps in a very poor condition, the decreased shipments to England have greatly aggravated the matter.



THE stocks of crude oil in the Californian fields are being rapidly taken up owing to the extended use of fuel oil on the Pacific coast steamers and at home, as well as to extending foreign markets.



IN the street lighting of Berlin 300 petroleum incandescent lamps are now used, and give a brilliancy which is preferred to the electric incandescent carbon filament lamps.



THE figures of the operations in the Pennsylvanian fields for October shew that, with the advent of winter, new developments are becoming scarce. The Illinois and Mid-Continent fields, on the other hand, are very active, and every effort is being put forward to cope with the constantly increasing production.



AT the annual meeting of the Commonwealth Oil Corporation the other day, the chairman (Sir George Newnes) spoke in most high terms of the future outlook for the company. It is not now a matter of speculation, he said, but only a matter of time in which to develop the great potentialities of the enterprise.



THE directors of the Standard Oil Co. have, in view of the constant prosecution to which the company is being subjected, sent a circular to the shareholders stating that the company's position is unassailable both from the legal and moral standpoints. The utmost care, the circular continues, is observed to conduct business honestly and fairly in accordance not only with the spirit, but with the technical requirements of the law.



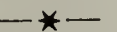
ANOTHER instalment of Mr. Clifford Richardson's article upon the petroleum of North America is contained in this issue of the REVIEW.



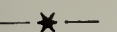
OUR readers will note that we have now included the quotations for the Commonwealth Oil Corporation's shares on the London Exchange in our oil quotations page. We have decided upon this step in consequence of the numerous dealings in the shares of this promising corporation.



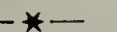
READERS will be pleased to learn that Mr. Frederick Lane, of Messrs. Lane and Macandrew, shipowners, of Great St. Helens, London, E.C., has recovered from his recent indisposition to such an extent that he is again "about the City."



"MAN wants but little here below." But this does not apply to the workmen at the Baku oil fields, whose long list of reforms are set forth in the report upon another page of the proceedings at the recent St. Petersburg conference.



Mr. D. A. SUTHERLAND, the General Manager of the Commonwealth Oil Corporation, whose photograph we reproduce in this issue, left London last evening for Australia.



Some correspondent of the daily papers, whose chief characteristic is not truthfulness, has recently circulated a report professing to give the world's production of petroleum in imperial gallons. It is not clear how that correspondent has arrived at his conclusions, but the figures in every case work out at about forty times less than they should be. For the information of this correspondent and also those who have been misled, we publish the correct figures on another page.

The Liquid Fuel Conference at St. Petersburg.

IMPORTANT DISCUSSIONS.

(Continued from page 255.)

The conference proceeded to consider the position of the coal industry. Mr. F. von Ditmar read an exhaustive report about the output and stocks of coal in the Donetz basin. He shewed that the output of coal there had increased, labour is plentiful, there being about 90,000 men employed, and that the railways were delivering increased quantities of coal. The Donetz coal fields are fully able to supply the needs of fuel in the southern provinces, having an output of 83,000,000 poods per month. The total producing capacity of these coal fields is estimated at 1,400,000,000 poods per annum. The South Russian coal industry, under favourable conditions, is fully able to cover the shortage in fuel.

Mr. A. I. Drey, representing the Ministry of Communications, submitted a proposal to temporarily permit the transport of coal and oil in foreign steamers from the Black Sea to Baltic ports, in view of the high freights charged by the Russian shipping companies. Further discussion shewed that the development of the coal production in South Russia is closely dependent on the transport facilities provided by the railways, and it was resolved to consider the railway question at the next meeting.

At the third meeting which took place on the 1st of November, Mr. V. A. Miasoiedoff-Ivanoff, Assistant Minister of Communications, explained that the Russian railways was really incapable of meeting all the demands made upon them by the trade of the country, not for want of rolling stock, of which since the conclusion of the war in the Far East there had been an ample supply, but owing to its inadequate carrying capacity. At the present moment on three railways running from the Donetz district to the north and north-west, which are congested as it is, a sudden demand has been made to transport large quantities of foodstuffs. Their maximum carrying capacity is 30,000,000 poods per month, whilst all of a sudden they were called upon to transport immediately 41,000,000 poods, and, after two months, 45,000,000 poods per month. After a protracted discussion it was agreed that it was necessary to reduce the quantities of goods presented for transportation—coal by 3,000,000 poods and grain by 2,000,000 poods. On the other hand, it was necessary to increase the carrying capacity of the Moscow-Kursk railway by the construction of a bridge, by 2,000,000 poods, and by sending 3,000,000 poods by a circuitous route. The latter would mean a 40 per cent. loss on the rate to the railways.

On the 3rd November the important question considered was whether it was advisable to temporarily adjust the import duty and railway rates to facilitate the importation of foreign fuel. In regard to oil fuel, the conference declared itself in favour of retaining in force the temporary law permitting the Minister of Finance to reduce, in exceptional cases, the import duty on foreign oil, and also adjust the railway rates. At the

same time, it was not thought that this could produce any moderation in prices in the Central Provinces, inasmuch as there was no suitable oil on the foreign markets available for this purpose.

The proposal made by the Moscow manufacturers to facilitate the importation of English coal to the Central Provinces, by lowering the railway rate by 2 copecs, gave rise to heated discussions.

Mr. J. P. Goujon spoke strongly in favour of such reduction. He said that, on the one hand, it would regulate the prices of Donetz coal and destroy the monopoly enjoyed by the latter, and, on the other hand, it would enable some consumers to replace liquid fuel by coal. It would also assist to settle the labour question at Baku, such a reduced consumption of oil fuel would lower its price and compel the Baku workmen to moderate their demands. He contended that even if by the construction of a special railway the delivery of Donetz coal could be increased, the consumers would not benefit materially, since the Donetz coal owners finding no competition could fix prices at their own will. The representatives of the coal industry naturally declared themselves against any measures facilitating the admission of foreign coal.

Mr. M. V. Tchistiakoff, Assistant Minister of Finance, declared that there was no need for lowering the railway rates for foreign coal, since at the high prices for oil ruling, foreign coal can compete with it under present conditions.

The President, summing up the debate, concluded that the conference did not think it necessary to adopt any measures to facilitate the entry of English coal to Central Russia.

In view of the necessity for the petroleum producers to return to Baku for the forthcoming land auctions, it was resolved to hasten the further deliberations of the conference, and to sit both in the day and in the evening.

The morning sitting on the 4th November opened with a request by the Kolomenski Engineering Works and the Vyksunski Metallurgical Works to grant them a lease, without auction, of petroliferous land for the purpose of producing fuel oil for their own needs. This was declined by the conference without discussion as being outside its scope.

The question was then taken up of the Government receiving their royalties in kind instead of money. Those in favour of this measure urged that it would put the Government in the position of owner of large stocks of crude oil, out of which it could on the one hand cover its own needs in liquid fuel, and thus eliminate the largest buyer from the market, and on the other hand it could, in the event of an excessive rise in price, come forward as a seller, and bring about a decline in prices. Against this, it was said that the Government ought not to encroach upon the sphere of private enterprise

Government commercial enterprises never thrive, and the measure, if adopted, could only result in loss to the treasury and harm to the industry.

In summing up, the President said that that question could be of no practical interest at the moment, as even if the proposed measure were immediately adopted, the Government could not, under the present high prices, commence accumulating stocks of oil. The majority of the conference, in his opinion, had declared themselves against the payment of royalty in kind.

At the seventh meeting, on November 4th, the eight representatives of the Baku workmen, who had arrived from Baku, were present. The questions down for discussion were concerning the special condition of labour at the Baku oil fields, and *re* the workmen's villages, unions of workmen and the conciliation boards.

After some discussion over the credentials of the labour representatives, the latter read a statement setting out the difficult conditions of work at the Baku oil fields, and the history of the labour movement there during the past twelve months. They pointed to the necessity of establishing workmen's villages, conciliation boards and labour organisations, and generally creating conditions which would permit the struggle between labour and capital to be carried on in a lawful manner.

The conference entered upon a discussion of the question of workmen's villages, which made it clear that of the four plots selected by the Baku petroleum Association for workmen's villages, the one at Balakhany, of an area of 189 acres, is of minor importance. The Balakhany oil field is becoming rapidly exhausted, the number of men employed is declining from year to year, and the housing difficulty there is not acute. Of greater importance are the plots marked out near the villages of Bule-Buli (121½ acres) and Ramany (189 acres), and which for surface use belongs to the peasants; but these also are of less importance than the plot at Bebe-Aibat (about 175½ acres), negotiations for which have for a long time been in progress with the Ministry of Marine, which controls it. The Balakhany plot the Government were prepared to grant freely for the purpose of a workmen's village. There remains the question of communications, as the plot in question is about five miles away from the oil fields. The producers expressed their readiness to construct a light railway or tramway to the confines of the oil fields, but not through the oil fields, which would be a difficult and costly undertaking. In regard to the Bule-Buli and Ramany plots, it was resolved that if no voluntary arrangement was arrived at between the Baku Petroleum Association and the peasants in regard to those plots, for which the association had set aside a sum of 151,000 roubles, the Government should obtain powers to expropriate these plots, and the Baku Petroleum Association were to decide what maximum amount they could pay to the peasants in the event of such compulsory expropriation. The refusal of the Naval Department to cede the Bebe-Aibat plot was considered unjustified, and it was declared of urgent necessity to secure this plot for the housing of the workmen.

The petroleum producers again asked the Minister of Commerce to postpone the land auctions at Baku, to enable them to take part in the same, but he refused to alter his first decision.

Mr. Goujon, in the name of the Moscow Exchange Committee, declared that no peaceful progress of industry was possible, unless the legitimate demand of the workmen for freedom of organisation was conceded.

The following meeting opened with a statement by the

Director of the Department of Industry of the result of his interview with the workmen's representative, and the demands put forward by the latter. These demands were: for an eight hours' day, abolition of overtime and introduction of a shift system, abolition of contract work, four free days a month, in addition to recognised holidays, a holiday on the 1st of May, full pay for strike period, re-engagement of all men dismissed during the strike or for political reasons, a housing allowance of 16 roubles per month to married men and 9 roubles to single men; at the refineries this allowance is to be 10 roubles and 5 roubles respectively; all disputes between employers and workmen to be settled by arbitration; refinery and oil field labour committees to be sanctioned, and no one to be dismissed without the sanction of such committees, in any case, three months' pay to be paid upon dismissal; a minimum beginning wage to be agreed upon, better medical facilities and establishment of hospitals, where there are none yet, insurance by employers and abolition of certain unsatisfactory conditions now attached to such insurance; men employed at Balakhany and Bebe-Aibat to receive 9 roubles a month for travelling expenses; full compensation for losses by fire; abolition of fines and penalties; abolition of temporary engagements, all to be for definite periods; six weeks' holiday with pay, longer holiday without pay; provision of libraries; education at the expense of the firms; workmen's villages and electric tramways to same; workmen's social clubs, political freedom, abolition of martial law, non-interference of police in strike, and free soup kitchens and housing for unemployed.

As was pre-arranged, these demands were not discussed by the conference.

Statements made concerning the housing of workmen in the refinery districts of Black and White towns at Baku revealed this to be in a very unsatisfactory condition, the dwellings being both dear and insanitary. It was resolved to propose to the Baku Petroleum Association to elaborate this question at the forthcoming meeting.

One of the workmen's delegates reverted to the question of workmen's villages at the oil fields. He understood, from the statement of previous speakers, that it was intended to establish on the same plots as the villages the mechanical workshops. If this were really the intention of the petroleum producers, then the whole question of villages had better be dropped. The men wanted to get out of the noise and turmoil in which they are during their work, and to have some peace and quietness when they get to their homes. When it was ascertained that the petroleum producers really intended to place the mechanical workshops in the villages, the president pointed out to them the undesirable nature of such condition, with which view the conference as a whole concurred.

At the meeting on November 8th the President announced certain steps adopted by the Government to increase the carrying capacity of the south-eastern railways by 3,000,000 poods.

The representatives of the workmen complained that the present conference proved quite fruitless to them, as it declined to consider their grievances.

The president replied that though their demands were not discussed they were not declined. There were so few of the Baku firms represented at that conference that it would be of little use to discuss those demands for no arrangement could be arrived at. It had, therefore, been resolved to refer the workmen's demands to a special conference of petroleum producers and workmen's delegates to be called at Baku.

(To be concluded.)

THE COMMONWEALTH OIL CORPORATION, Ltd.

FIRST ANNUAL MEETING OF SHAREHOLDERS.

REMARKABLE PROSPECTS.

The first ordinary general meeting of the shareholders of the Commonwealth Oil Corporation, Ltd., was held at the Westminster Palace Hotel, Westminster, S.W., on Tuesday, the 13th inst., Sir George Newnes Bart, M.P., presiding, the other directors present being Sir William B. Avery, Bart., Mr. R. L. Harmsworth, M.P., Mr. D. Elliott Alves and Mr. William Blyth, while there were also present the consulting engineer and general manager of the company—Mr. David Alexander Sutherland, F.I.C.—and a large



VIEWS TAKEN ON—

attendance of shareholders, among the latter being Sir William Ramsay, K.C.B., F.R.S.

Mr. CHARLES F. JONES, the company's secretary, having read the notice convening the meeting,

Sir GEORGE NEWNES rose to propose the adoption of the report and balance sheet of the company, which, having been circulated, were taken as read. In doing so, Sir George said:—

This meeting is not held with the intention of giving a full or detailed statement of the affairs of the company, but has been, in fact, called in order strictly to comply with the articles of association, which provide that such a meeting must be held in the course of the current year. It has, therefore, not been possible to get any complete statement of the accounts from Australia in time. Nevertheless, the greatest care has been exercised in this direction, and the Sydney agents of our London auditors, Messrs. Starkey and Starkey, are conducting a monthly audit locally, and forwarding the details to London. It was very desirable to summon this meeting at a time when our consulting engineer—Mr. D. A. Sutherland—is in London, so that he might be present to answer any question shareholders wished to ask.

During the past six months a very large amount of work has been carried on both in connection with the mines and the railway. The sidings on the Government line have been practically completed, saw mills erected for the making of sleepers, cuttings made, and a very considerable amount of construction work has been done in order to enable the rest of the work to be carried out as quickly as possible.

The discovery of the deposits of coal, a considerable section of which has given promise of being highly suitable for coking purposes, made the advisability of the bringing of our standard gauge railway into the Wolgan Valley of greater importance than ever, and no stone has been left unturned in order to accomplish this as efficiently and speedily as possible, consistent with a due regard to a future economical working of the line. It would be difficult to convey in a few words the amount of important work which has had to be carried out in order to arrive at the present position, but it may be taken that all difficulties have been surmounted, and that the line will be completed by next July, if not sooner.

Mr. Sutherland is leaving for Australia in the course of a week or so, and will report to us as soon as he has investigated the further development of the coal beds which are believed to be very valuable. He will also definitely choose the site of the future township which we are anxious to provide for the healthy housing accommodation of our workmen as well as our officials. It must be remembered that we shall ultimately employ over 1,000 men, and with their wives and families and others, a township of some 5,000 or

6,000 people will be created. All the land on which it will stand is the property of the company.

Since the formation of the corporation the large area of land originally acquired has been very considerably added to, and the extent of land held for mining purposes at present exceeds 35 square miles. As a matter of fact, the entire area is over 40 square miles, but that which is suitable for mining is, as I have said, 35 square miles. The surveys and prospecting operations which have been carried out continuously over the greater part of the area have shewn the reserves of oil and export shale to be much larger than was originally anticipated. There are many millions of tons awaiting development, and amply sufficient of the raw material to more than satisfy the wants of the present generation. I have had some very astounding figures as to the quantity given me, which are almost calculated to stagger humanity, but I prefer to put it in the way I have done and say that they are more than sufficient to satisfy the needs of the present generation. There is no doubt we possess the largest deposits of oil shale known in the world. The deposits are exceedingly rich, the shale yielding from 50 to 130 gallons of crude oil per ton. What this means in the way of profits may be better understood when it is explained that the average quality of shale in Scotland on which companies pay dividends of 15 to 30 per cent. per annum does not contain more than 30 gallons to the ton, and that the prices which we obtain for our finished products are more than double the prices obtainable in Scotland. (Hear, hear.) The ordinary shale yielding 60 to 70 gallons per ton (it will be fully 80 gallons at Wolgan) is distilled freely in Australia at present in the New South Wales Shale and Oil Works, which we have recently acquired.

An experiment being conducted in Scotland at the present moment with some of our export shale (not a small but a large quantity of many tons) has resulted in from 100 to 120 gallons per ton being obtained, and shewing that with some modifications the Scotch form of retorts can be adapted also to the distillation of the very rich shale.

Large deposits of rich shale have for a long time been known to exist, and described in Government blue-books, and the sole reason for these properties remaining unworked has been their great inaccessibility. The key to the whole position is the line of railway that we are at present pushing ahead as fast as possible.

In the meantime mines development has been going on, and from



—THE COMPANY'S PROPERTY.

one of our tunnels a regular output of about 100 tons per day of shale is being produced now at Wolgan, and will lie awaiting carriage by the railway.

Our purchase of the New South Wales Shale and Oil Co. in the spring has taught us a good deal of local experience. Although this business is quite a small one in comparison to the contemplated works of the Corporation, it affords us much useful information with reference to the local problems of distilling the shale, and refining and selling the oils, candles and other products. At the same time there is much life left in the old property, and its operations will bring us nearer to a dividend paying stage than was originally anticipated.

It was thought that this mine would be worked out in a few years,

and we purchased it on a basis that we should get our money back in profits in three years. Mr. Sutherland, however, by careful investigation, has discovered that there is a far larger extent of shale than was counted upon, and that the mine has many years of prosperous working before it. The prices of oils have risen for the most part, and there has been no difficulty in selling the manufactured products. (Hear, hear)

Recent legislation in New South Wales shews that the Government is not kindly disposed towards imported oils and foreign Trusts, and that our enterprise is welcomed as a means of giving employment to many Australians and of developing the natural mineral wealth of the country.

When I mention that we do not propose to produce more than 3,000,000 gallons per annum of burning oil, and that the consumption of this product alone in Australia is 15,000,000 gallons, you will see there is enough scope for enterprise. At the present time the profits derived from the smaller company have not included the sale of one gallon of this oil, our production being absorbed by the local gas companies, with whom we have a contract for 1,300,000 gallons per annum.

Turning now to the balance sheet, there is not very much to be said, as I have already explained, it does not profess in any way to be complete. The expenditure on development work, railway, etc., amounts to about £50,000. It has been decided to make the accounts up in future to the end of June, in order to have a complete statement ready in time for a meeting each November, or perhaps earlier.

Now, gentlemen, I have nothing more to say: our resources are so vast that it is very tempting to speak in high phrases, but this I have studiously avoided. I have rather sought to go upon plain facts carefully verified. But I should be lacking in my duty to the shareholders if I did not inform you of the bright prospects before us. It is not now a matter of speculation; we have long past that stage, it is only a matter of time in which to develop the great potentialities of the enterprise. (Applause.)

I now beg to move the adoption of the report and accounts, and I will ask Sir William Avery to second the proposition.

Sir WILLIAM B. AVERY seconded the motion.

The CHAIRMAN then called upon Mr. D. A. Sutherland, the company's consulting engineer and general manager, to make a statement regarding the company's operations.

Mr. D. A. SUTHERLAND, in addressing the shareholders, said:—In the course of two visits to Australia I have personally examined each of the tunnels, mines and works on the company's territories, and have thoroughly satisfied myself that there are exceptionally large reserves of shale on the properties. Careful sections of the shale beds have been made throughout the mines, and many analyses made to prove the importance and value of the corporation's shale fields. Everything necessary for the adequate development of the properties and the refining of the products is at hand. There are large quantities of coal, a river which is not known to have run dry even during the drought; we have on the spot building stones, clays and fire-clays for brickmaking, timber in abundance for mines, buildings, or for railway sleepers. Not only is the shale area of great extent, amounting to millions of tons, but it has proved to be of very great richness. In my original report I assumed an average yield of 60 gallons per ton, but so far practically all the shale found in the new field has given a yield of upwards of 80 gallons per ton, while the export or gas-making shale has given much higher results. At present an experiment is being made with 50 tons of the richer shale in the ordinary Scottish retort at the Pumphreston Oil Works.

The figures of the experiments still going on in Scotland I had not intended to give, but the astonishing results made me feel that the board should be apprised, and they in turn have authorised the shareholders to know at once.

The result has shewn that after experimenting in order to obtain the best results, the test of 10 tons has given an average of 125 gallons of oil and 26 pounds of sulphate of ammonia per ton of shale. I originally assumed 10 pounds per ton, and so the difference to us amounts to 2s. per ton. On Saturday last the yield reached 140 gallons and 30 pounds of sulphate of ammonia, and I at once went up by the night mail, returning yesterday morning after having verified the figures. I have upon several occasions been present during the experiment, which was under the personal supervision of an experienced assistant.

Mr. Sutherland then proceeded to explain the qualities of the various oils, samples of which were placed on the table. The first sample to which he called attention was that of the illuminating oil, which he added was of quite exceptional quality. The sample of crude oil exhibited, the speaker explained, was won from the

shales in the first instance, and upon re-distillation it yielded the oil corresponding to the sample of illuminating oil. The results, however were astonishing, for the company could produce crude oil for something under 10s. per ton, but in addition to every 140 gallons of oil they obtained, they got three or four gallons of a lighter spirit or benzine suitable for motor cars. Another sample was of the lubricating oil. This, said Mr. Sutherland, was of about .890 specific gravity, and was of exceedingly good quality, better, in fact, than the Scotch lubricants. But in addition, they had paraffin wax, which was a very valuable product, and from which candles of a high quality were made.

As regarded the railway route the railway survey work carried out secured the only possible satisfactory route for a railway into the Wolgan Valley. There was no engineering difficulty for the first 20 miles. He had often ridden the route, so he could personally vouch for that. The latter part, namely, the descent into the Wolgan Valley was a more difficult task. At one time it gave him much anxiety, but that was all past. It had been most carefully studied and settled by a much abler man than himself, a man who had constructed practically all the railways in New South Wales—he referred to his colleague, Mr. Henry Deane, M.I.C.E., who was carrying out the work on his behalf, who acted as his representative and the company's consulting engineer in Australia. The construction of the railway was safe in Mr. Deane's hands, and he had assured the speaker that he meant to make it a record in time and economy. A glance at the map of New South Wales would shew the general situation of the properties with reference to Sydney. An enlargement of the shale-bearing section shewed the relative position of the properties one to another. The main properties situated at Wolgan and Capertee are indicated in colour, and the route of the railway line linking them up with the Government system is shewn on the map. While the railway was being constructed the mines were not idle as development was going on vigorously, and shale was being accumulated ready for transport as soon as the railway was completed.

The mines of the New South Wales Shale and Oil Co. now belonging to the Commonwealth Oil Corporation, Ltd., were situated at Torbane, and there further careful work had been carried out and proved very large reserves of shales to exist. With the New South Wales Co. they took over the entire staff including Mr. Hall as general manager, to whose tact and skill they owed the beautiful exhibit shewn on their behalf in Sydney.

The business of the New South Wales Co. enabled them to test the markets at once, and at the same time to experiment on a large scale in order to determine the best systems for application in the new works. Every step was being carried out with care and all foresight possible; no fresh step was taken until they were satisfied that was the best possible course. He received weekly long reports of progress, and felt assured the corporation was loyally served by all the staff in New South Wales. He would be glad to answer any technical questions, and, in conclusion, had no hesitation in saying that he had the greatest possible personal belief in the success of the corporation's undertaking. (Applause.)

The motion for the adoption of the report was then put and carried unanimously.

The CHAIRMAN next proposed that the retiring directors—Sir William Avery, Bart., and Mr. D. Elliott Alves—should be re-elected. In doing so, he stated that both gentlemen had been upon the board since its inception, and he could personally testify that they had rendered most excellent service.

Mr. WILLIAM BLYTH seconded the motion, which was agreed to, while, on the motion of Mr. J. W. PEARSON, the auditors were re-elected.

Sir WILLIAM RAMSAY, K.C.B., F.R.S., said he had great pleasure in proposing a hearty vote of thanks to their Chairman for presiding that day. He desired to explain that he had a very interesting interview with Mr. Sutherland, and he needed not to say that he went into the whole of the statements made to the shareholders that day in somewhat more detail than was possible to do at a meeting like that. He could only say that every word that had fallen from their chairman was thoroughly justified, and that they possessed an extremely good property. He hoped that in the course of a few months they might hear some further interesting news regarding the development of their properties.

The resolution having been seconded and carried unanimously, The CHAIRMAN, in reply, said that he took it as a compliment to his colleagues on the board as well as to himself. He could assure the shareholders that the work was most interesting. The board had had an immense amount of work to get through, and had devoted many hours to the numerous matters which had had to be decided in connection with that great undertaking. They did not, however, complain in the least; for the more work they did, the more they were encouraged to go on.

The proceedings then terminated.

The Primary and Secondary Deposits of Petroleum Occurrences.

(Concluded from page 224.)

In more recent times petroleum geologists have maintained that when there are several oil horizons one over the other, there is only one primary deposit, from which the oil has wandered and collected in the porous formations forming secondary deposits, the oil passing either through crevices or the pores of strata intervening between the oil deposits.

The possibility of the spread of the oil through crevices and the formation of secondary deposits was explained by the writer in 1888. It was urged by some people that in anticlinals the whole series of rocks may be broken and cracked, thus allowing the oil to wander freely. This may be true in all cases except those when there are facts speaking against it, such as the quality of the oil in the primary and secondary deposits. Should the difference in quality be such as could not have been produced in course of the passage of the oil, then this theory falls to the ground.

Mr. L. Szainocha assumes for all the Galician petroleum deposits original formation in the oligocene menilite slates; he mentions that the petroleum deposits found between the slates and slate clays are proved to be impenetrable for oil or water, and the passage of the oil must therefore have taken place through crevices. The oligocene sandstone which lie nearest to the original place of formation of the oil and are very porous, must, therefore, represent the richest oil horizon. In a geological sense the petroleum occurrence in Galicia is of two kinds. There are primary deposits in upper eocene sandstone and slate formations in the wide carpathian zone; there are also secondary deposits at many points in the sub-carpathian miocene formations, as, for instance, at Boryslaw. To this statement it should be added that where the miocene formation is oil bearing, it is also found to be intersected by numerous crevices. The oil has been struck partly in these passages and partly in the sandstones embedded in the miocene formation and form an oil pool.

Messrs. Monke and Beyschlag are of the same view, and declare that there is no petroleum deposit which can be indisputably declared to be a primary deposit. Against this it may be said that the nature of petroleum deposits can so rarely be definitely fixed because they are reached almost exclusively by borings. The only deposits which are known to the author to have been laid bare in their whole extent in the ordinary mining way are those at Pechelbronn, Alsace, the primary nature of which cannot be doubted, as will be explained lower down. In connection with this it may further be said that the anticlinals in the oil regions of Pennsylvania are so gentle that deep going crevices are in those regions most improbable. The anticlinals in Pennsylvania are so flat that they can be located after a very careful observation.

Fuchs and Launay are of the opinion that all or nearly all petroleum deposits are, properly speaking, secondary deposits, by which they indirectly acknowledge themselves adherents of the so-called emanation theory of the origin of petroleum.

A second theory for the formation of secondary deposits assumes that the oil either in vapourised or liquid form penetrated the rock formations separating the deposits and accumulated later in the porous formations. The writer is against this theory and advances many arguments. He cites the experiment made by Dr. David T. Day by filtering petroleum through Fuller's earth, which not only removed the colour of the oil but separated the lighter from the heavier fractions. Dr. Day concluded from this that all the American petroleum have a common origin in the Silurian Trenton limestone of Ohio and Indiana, and that the Pennsylvanian oil found in the Devon formation had ascended from the Silurian formation, and, by filtration, changed its quality. This opinion was also expressed by the Rev. T. N. MacGonigh. It is, however, entirely inadmissible in view of the fact that between the two oil-bearing strata there is a series of slate clay, marl limestone and sandstone formations of at least 1,000 metres thick, through which the oil would have had to penetrate. Accumulations of petroleum should have been formed, which is not the case, as the intervening strata are either entirely free of oil or contain it in very trifling quantity. It may also be mentioned that in Pennsylvania the oil in the upper oil sands is heavier and darker than in the lower sandstones, which fact likewise contradicts the above-mentioned theory.

E. Orton declares that the passage of oil and gas through rocks, where there are no cracks, is impossible, and in such cases he accepts the deposits as primary ones, and says that the principal deposits are hermetically sealed in the strata that contain them. As proof, he points to the Monroe well in Onondaga county, New York, where in 1895 the Trenton limestone was reached at a depth of 2,250 feet, and gas with a pressure of 1,525 lbs. to the square inch was set free. The strata above this was partly porous, but shewed no signs of the existence of this gas. When gas with its great pressure is unable to penetrate the strata lying above it, oil cannot certainly be expected to do so. In conclusion the author points to the well-known fact that the gas in oil deposits are encountered in drilling only a few metres above the latter, even when a powerful spouter is obtained, which shews that the gas cannot penetrate to any distance when there is no opening in the rocks.

Another hypothesis presupposes a bituminous rock, in which the oil is sparsely scattered, and from which, under pressure, it commenced to wander, and accumulated in the porous rocks. In this direction an interesting experiment was made by Mr. Aug Stella. In an iron cylinder, at the bottom of which was a sieve and on the top a tightly-fitting piston, a mixture of clay and crude petroleum is put; under the sieve linen is tied, and between the sieve and the linen is put a thick layer of dry sand. In a cylinder of 38 mm. diameter the piston was pressed in by hand, and the upper part of the clay became dry for 6 cm. When the pressure in a cylinder of 62 mm. diameter is increased to 10

atmospheres, the whole mass of clay, 50 cm. thick, became dry, and the oil impregnated the sand between the sieve and the linen. It is not stated to what extent the clay still contained oil. According to this experiment, the formation of the oil takes place over an extended area, and the so-called oil sands are, partly at least, secondary deposits. Mr. A. P. Stahl accepts a similar process for the origin of the Baku oil deposits, and considers the oil in the sands as secondary deposits, having originally been distributed in the accompanying clay shales and sands.

When considered in the light of geological observations, however, the Stella experiment loses all importance. We find bituminous and even oil shales, which are used for the production of illuminating oil, such as in Lothian (Scotland) and Steierdorf (Austria) at great depths, with sandstones over and under them, which are not bituminous. It may be mentioned that the pressure of the rocks is much over-estimated, and is not equal to the weight of the overlying masses, as the latter are embedded in the earth's crust in the form of arches.

Messrs. Edeleanu and Tanasescu likewise express the view that the light coloured crude oils of Roumania are of secondary formation, from primary darker oils by filtration through porous marl strata. The latter should consequently be coloured dark and somewhat bituminous, on which point, however, there are no data given. The wandering of oil through impervious rocks, such as clay, shale clay, etc., in which there are no crevices, must for many reasons be considered as an improbable hypothesis.

Petroleum is also found in small hollows in eruptive rocks, but the quantities are so insignificant that they can only be of purely scientific interest. Thus bitumen was found in small quantity in granite in Cornwall, Auvergne (France) and Scandinavia, in Melaphyre, in Central Scotland, Bohemia and in the Rhein-Pfalz (in Germany), in Diorite in Gaspé (Canada), etc. The bitumen enclosed in the eruptive rocks is partly crude petroleum and natural tar, asphalt, but rarely ozokerite or paraffin. Bitumen is also found in certain iron deposits. The petroleum incrustations in the rock crystal at Diamond near Gonterville, Alabama, have been described in detail by Chas. L. Reese in the *Journal of the American Chemical Society*.

The rock masses during their eruption crosses through bituminous rock or a coal deposit, which, owing to the high temperature, underwent a process of destructive distillation, and produced products similar to petroleum.

Every secondary deposits presupposes the existence of a primary deposit; it is, however, erroneous to draw conclusions from the productivity of the one about the other. If the primary deposit is in shale clay, which is capable of absorbing and retaining large quantities of oil, in which subsequently cracks were formed, the surplus oil could enter the latter, and, if the cracks were extensive, they can form prolific secondary deposits, whilst in the primary deposit the strongly bituminous shale clay would yield into a well only very small quantities of oil daily.

Many erroneous ideas about petroleum deposits are

prevalent not only in lay circles. The expression "Underground oil reservoir" is intended to convey an impression that in the earth's crust there are large hollows completely or partly filled with oil. In special technical works a sketch is frequently shewn of a lentil-shaped hollow space, which is filled at the bottom with water, the middle with oil, and the top with gases. Such hollows may possibly occur, but have nowhere yet been found. Their existence should have been easily detected in drilling by the sudden dropping of the drilling tools.

BATOU M PETROLEUM EXPORT TRADE.

STATISTICS FOR SEPTEMBER.

The exports of petroleum products from Batoum in September shewed a rather poor total—not exceeding 2,200,000 poods. The decrease has affected every class of oil, but the largest decrease has occurred in the shipments of kerosene in bulk, which amounted to only 937,000 poods. The decrease in bulk shipments is due to a falling off in exports to England, which usually absorbs the largest part of bulk exports. This decrease is also partly due to reduced deliveries of kerosene from Baku. The case oil trade remained at its normal level during the month, the shipments having amounted to 623,000 poods. The demand for cases was steady, and the price fluctuated between two roubles and 1 rouble 94-95 copecs per case.

The following are the figures of the arrivals from Baku and shipments from Batoum during September and of the stocks on October 1st (in poods):—

	Arrivals.	Shipments.	Stocks on Oct. 1st.
Refined Kerosene ...	1,400,000	1,560,000	1,305,000
Kerosene Distillate ...	—	4,000	56,000
Solar Oil ...	128,000	—	482,000
Machine Oil ...	366,000	496,000	285,000
Spindle Oil ...	10,000	26,000	22,000
Cylinder Oil ...	9,000	10,000	13,000
Vaseline Oil ...	—	59,000	22,000
Lubricating Oil Dis.	—	—	17,000
Residuals ...	58,000	69,000	140,000
Total ...	1,971,000	2,220,000	2,342,000

The stocks, both of the large and small firms, are very small, and are barely sufficient to cover immediate needs. In the distribution of the exports among the various countries a considerable change is to be noted. Thus to England there were exported 639,000 poods, which is about one-third of the normal monthly figure. The export to France also fell considerably, namely, to 156,000 poods, which did not include any refined kerosene or distillate. To Germany there were exported 310,000 poods. There was a marked falling off in shipments to Belgian and Dutch ports, which hitherto took up considerable quantities of Russian oils. Thus to Belgium during the whole of September there were exported no more than 98,000 poods. To Austrian ports there were shipped 54,000 poods.

The total export of case oil, including a small quantity of barrel oil, amounted to 625,000 poods, of which only a small part went to Egypt and the rest to Turkish and Balkan ports. Apart from this 338,000 poods of kerosene in bulk were shipped to Russian home ports.

RUSSIAN.. ANDROUMANIAN.. NOTES.

The Steaua Romana, in one of their wells at Eustenari near the church, are increasing the height of the derrick in order to be able to work with a very long baler.

The Royal Dutch Company.—It is reported that the Royal Dutch Co. has acquired an interest in the Roumanian petroleum industry. They have already established themselves in Roumania, under the name of their representative, Mr. C. M. Pleyte.

Messrs. V. I. Ragsine and Company, lubricating oil manufacturers of Moscow, during 1905 earned a net profit of 24,161 roubles on a gross revenue of 1,395,503 roubles. The capital of the company is 3,500,000 roubles.

Honour to Mr. A. Raky.—His Majesty King Charles of Roumania, having expressed a desire to see Mr. A. Raky, the last-named gentleman has recently had the honour of receiving an audience with the King of two hours' duration.

The Regatul Roman Company.—The directors of the Regatul Roman Co. have elected the following gentlemen as a management committee:—A. Raky, W. Langen, Heine and Economos. The following gentlemen were appointed managers:—A. Braun and S. von Voss.

Working Capital Wanted.—The Tiflis Commercial Petroleum Co., operating in Baku with a nominal capital of 250,000 roubles, has, during last year, which was their first financial year, been engaged in equipping their property. There was no revenue, whilst practically the whole of the capital was expended.

A Successful Year.—The Moscow-Caucasian Petroleum Co. has completed their fourth financial year 1905 with a net profit of 1,575,975 roubles. The nominal capital of the company is 4,500,000 roubles. The assets of the company include cash in banks, 2,125,994 roubles; cost of borings, 1,539,258 roubles, and cost of tunnel for draining the Ramany, Saboontchi and Zabrat Lakes. The last-named item has to be written off in ten years.

Roumanian Oil for Germany.—Prof. E. Schanz has carefully investigated the question of the possibility of supplying Southern Germany with Roumanian oil *via* the Danube, and come to the conclusion that by this route Roumanian oil can be delivered economically as far as Karlsruhe, Frankfurt-on-Maine, Göttingen, Wittenberg and even Dresden. This region has a population of 17,000,000 people, and annually consumes no less than 290,000 tons of petroleum.

Historical or Political?—The Statistical Bureau of the Baku Petroleum Association has recently issued a circular to all the petroleum producers asking for information *re* the recent strike, how it originated, the behaviour of the men, the action of the authorities, the terms of settlement, etc. The object of these inquiries is most praiseworthy, but the majority of the firms are averse to supplying the information for political reasons. Out of 170 firms addressed, only a few had given non-committal replies at the time of writing.

Czaritzin Stocks.—On October 24th the stocks of illuminating oil at Czaritzin, on the Volga, were as under:—

		Kerosene. Poods.	Residuals. Poods.
Nobel Bros .. ..	..	189,500	1,357,000
Mazout Co. .. ..	..	358,377	62,370
Neft Co. .. ..	..	255,077	2,700
Caspian Society .. ..	..	75,000	—
Volga-Caspian Co. .. ..	..	256,970	59,930
Merkulieff Bros. .. ..	..	763,200	—
G. S. Dembot .. ..	..	49,500	—
S. Assadulaeff .. ..	..	312,818	—
G. Merkulieff.. ..	..	249,596	—
V. P. Lapshin .. ..	..	—	220,000
Total .. ..	..	2,510,038	1,701,600

Colombia Co.'s Production.—The production of the Colombia Co. now amounts to 150 tons of crude oil per day.

Great Prospects.—A well belonging to Mr. F. Drader, and situated at Tintea, Roumania, has struck oil in abundant quantities, and holds out the prospect of great developments in this hitherto neglected region.

No Money: No Oil.—From Ferghana comes the news that the Rishtan Co. has expended on a well, which has now reached a depth of 980 feet, nearly the whole of their capital, without obtaining any signs of oil.

Taking Time by the Forelock.—Well No. 1 of the Regatul Roman Co. at Poiana has reached the oil stratum. The exploitation of this well will not be begun until the construction of the storage tanks is completed.

A Tzinta Spouter.—A borehole belonging to Mr. F. Drader, and situated in Tzinta, has just reached the oil stratum and produced a spouter from a depth of 310 metres. The production has not yet been fixed, but is expected to be very considerable.

Contemplated Refinery Extensions at Ploesti.—Dr. D. Goldstern, formerly manager of the Astra refinery in Ploesti, has purchased the refinery of Mr. Filote near Bucarest. This refinery is known as very well equipped, and its new owner proposes to considerably enlarge it.

To Exploit at Baku.—The Provincial Assembly of Nobility of Tiflis has resolved to purchase and exploit for their joint account a plot of petroliferous land at Baku. A capital of 300,000 roubles is to be provided for the purpose, and it is proposed to drill and equip three boreholes.

The Aralo-Caspian Petroleum Co. during 1905, their first financial year, incurred a loss of 97,439 roubles; in 1904 (nine months only) they incurred a loss of 32,908 roubles, making a total loss to date of 130,346 roubles. This company owns a plot of petroliferous land at Saboontchi of an area of about 15 acres, on which there are four wells. The nominal capital is 1,500,000 roubles. The property is valued in the balance sheet at 1,652,219 roubles.

A Bad Year.—The Motovilikha Petroleum Contract Boring and Engineering Co., owning two refineries and four petroliferous plots at Baku during 1905, incurred a loss of 651,254 roubles on a gross revenue of 133,238 roubles. The company's loss in the August riots amounted to 663,574 roubles. The normal capital is 2,400,000 roubles. The company owns 30 boring rigs for contract boring and engineering works for the manufacture of boring tools and materials.

Astrakhan Shipments.—According to official statistics, the shipments of petroleum products from Astrakhan up the Volga in September were:—Crude oil, residuals and goodron, 21,746,000 poods; kerosene, lubricating oils, benzine, etc., 4,169,876 poods; in all for the month, 25,915,997 poods. The total shipments from the opening of navigation to October 1st (o.s.) were 183,850,730 poods. In the corresponding period of the three preceding years the shipments were:—1905, 239,402,537 poods; 1904, 289,005,812 poods; and 1903, 266,659,895 poods.

To Facilitate Transport.—The Roumanian Government has decided in principle upon the construction of a railway line between the towns of Ploesti and Tergovesti, either *via* Buda or *via* Baicoi. This is to take the place of the proposed private line which the Regatul Roman Co. wished to build between Campina and Moreni. The Government line would run parallel to the whole petroliferous line—Baicoi, Moreni, and Gura - Ocnița. It is also proposed to double the Ploesti-Campina line, in view of the increased traffic on the same. The companies operating on this zone will be asked to contribute towards the cost of construction.

THE RECENT BAKU AUCTIONS.

The auctions for the leases of Government petroliferous lands at Baku took place, as arranged, on the 14th of November, with the following results:—

No. of Plot.	Field.	Successful Bidder.	Royalty to be paid to the Govt. Per cent.
10	Bebe-Aibat	Ogulevitch ...	56.55
13	"	Aramazd Co. ...	59.6
34	"	Mantascheff Co. ...	51.53
35	"	Nobel Bros. ...	51.3
36	"	Caspian Society ...	51.3
39	"	" ...	54.3
40	"	" ...	61
41	"	Nobel Bros ...	52.17
42	"	" ...	53.19
43	"	Naftalan Co. ...	47.2
8	Saboontchi	Caspian Society ...	59.1
9	"	Nobel ...	62.23
10	"	" ...	63.24
11	"	" ...	61.13
12	"	Russian Naphtha Co. ...	34.23
16	"	Nobel Bros. ...	56.11
21	"	Naftalan Co. ...	57.626
28	"	Nobel Bros. ...	56.11
62	"	Moscow-Caucasian Co. ...	70.25
63	"	" ...	70.25
64	"	" ...	70.25
14	Ramany	Assadulaeff ...	61
15	"	Baku Naphtha Co. ...	44.14
16	"	Nobel Bros. ...	61.19
17	"	" ...	62.17
25	"	Mukhtaroff ...	42
34	"	Moscow-Caucasian Co. ...	70.25
35	"	" ...	70.25

It will be observed that nearly all the plots have been secured by the largest firms. Thus Nobel, for instance, secured 10 plots, the Moscow-Caucasian Co. 5 plots, Caspian Society 4 plots, etc. The royalties to the Government have exceeded the most daring expectations. The Moscow-Caucasian has offered $70\frac{1}{4}$ per cent., Nobel Bros. have offered for the Saboontchi plots upwards of 60 per cent., and generally the royalties ranged between 55 and 60 per cent. These high royalties find some explanation in the geographical situation of each plot. The firms have made the highest bids for those plots which adjoined the ones now worked by them, and the high royalties now undertaken are somewhat counter-balanced by the low royalties which they pay for their old plots. The small firms and speculators secured nothing at the auctions.

BATOUM PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended October 28th, o.s. (in poods):—

	Illuminating Oil. 1906.	Other Products. 1906.
To Europe ...	—	1,000
" the East ...	120,000	4,000
" Russian Ports ...	125,000	12,000
From 1st January to 28th October—		
To Europe ...	10,169,000	6,478,000
" the East ...	6,015,000	55,000
" Russian Ports ...	2,494,000	229,000

PRODUCTION OF CRUDE OIL IN ROUMANIA DURING THE FIRST NINE MONTHS OF 1906.

The production of crude oil in Roumania during the first nine months of 1906, compared to the corresponding period of 1905, was as under (in tons):—

	1906.	1905.
January ...	58,219	42,086
February ...	55,650	43,853
March ...	67,464	45,184
April ...	75,235	46,938
May ...	76,061	48,559
June ...	71,729	50,000
July ...	79,359	51,044
August ...	76,904	53,101
September ...	75,804	49,009
Total ...	636,425	429,774

The production during the nine months in the different fields was as under:—

	1906.	1905.	Increase or Decrease in 1906.
Prahova District—			
Bustenari ...	377,009	293,571	83,438
Campina-Poiana ...	76,479	70,028	6,451
Moreni ...	106,053	21,834	84,219
Baicoi ...	33,552	1,473	32,079
Tintea ...	8,558	5,030	3,528
Pacureti-Ochisori ...	1,003	661	342
Apostolache ...	1,943	219	1,724
Recea ...	927	2,030	—1,103
Other fields ...	2,437	1,056	1,381
Total for Prahova	607,961	395,902	+212,059
Dambovitza District—			
Gura-Ocnitza ...	9,060	13,318	—4,258
Colibasi ...	2,156	3,154	—998
Glodeni-Badislavoia ...	1,557	1,943	—386
Other fields ...	106	166	—60
Total for Dambovitza	12,879	18,581	—5,702
Buzeu District—total	9,033	9,520	—487
Bacau District—total	6,551	5,771	+780
Grand Total ...	636,424	429,774	+206,650

The production of the principal firms in the first nine months of 1906, compared with the same period of 1905, was as under:—

	1906.	1905.
Steaua Romana ...	197,937	148,432
Bustenari Co. ...	98,267	63,352
Regatul Roman Co. ...	68,745	21,387
Telega Oil Co. ...	43,159	33,199
International Co. ...	31,547	39,604
Romano-American Co. ...	34,394	2,269
C. M. Pleyte (late Moreni Co.) ...	29,573	3,256
Trajan Co. ...	17,472	21,240
Arnheemsche Petroleum Co. ...	9,011	16,399
Aquila Franco-Romana ...	10,139	3,964
Colombia Co. ...	13,931	3,973

The Burma Oil Company.—It is reported that the Burma Oil Co. has recently obtained an agreement with the Government of India by which they acquire land for the construction of a pipe line to Rangoon, which line will be over 300 miles in length.

OUR AMERICAN LETTER . .

From
Our Own . . .
Correspondent.

PITTSBURG, November 14th, 1906.

Since my last letter to the REVIEW, some six weeks ago, there has been a general lull in the activity throughout the American fields, and, as I then pointed out, the tendency is to stop the lull unless in cases where land lease agreements are to the contrary. Whatever activity is now seen throughout the Eastern oil field is that necessary to speedily complete work in hand before the full force of the winter season is felt, and in this respect where there is no great amount of work under way or starting in any one locality, it still amounts to a considerable value in the aggregate. The scarcity of any large areas of territory that is known to furnish wells of a size that would warrant the investment of money required to develop has a great deal to do with the various fields being kept down to their present activity.

The one field that has presented an innovation in local territory, though its producing status is as yet an unknown quantity, is the property of the Natural Gas Co. of West Virginia, which is located on the Dague farm near East Finley P.O. in East Finley township, Washington county. This test was drilled for gas, but when drilled into the fourth sand, oil was encountered and the well flowed with considerable force, filling a 250-barrel tank the first 15 hours. As soon as the well began to flow, drilling was suspended, the tools taken out and the well shut in to await the erection of additional tankage and for the pipe line company to lay its line to the well. That part of Washington county has been noted for small pools in the past. The Natural Gas Co. of West Virginia holds leases on about all of the territory in the immediate vicinity of the new strike, and has been drilling for some time for gas in that section. The local fields have not been able for more than a year to present anything in the way of a new pool of any appreciable dimensions. The last is the one located near Burgettstown and it has now been very fully defined and the most of the interior developed.

News of another piece of important test just reaches me. South of the new Big Injun development on State Road Run in Green district, Wetzel county, Hervey, McNaught and Co. have drilled a test on the Pittman farm, in the Big Injun sand, and have a show of oil. This test is more than a mile south of the good producer, owned by the same company, located on the Oliver Cochran farm. The Pittman farm test has not been drilled deep enough into the sand to make the test complete. Should it improve with deeper drilling it will open up a considerable area of territory to the south, and make the outlook for a pool of considerable size quite promising. There are now four test wells drilling and starting in the new pool, and before the close of the month more will be known of the future of the development.

Turning to the Indiana field, Jay county is one of the most active spots, the work being almost entirely confined to Bear Creek township. A dozen years ago this same territory that is now being drilled over was looked upon as worthless, and the seat of activity in the county



was then confined mostly to Penn and Jackson townships, where some of the big wells of the early days of Indiana oil were found. The pool at Camden or Pennville, in Penn township, was famous in its day as wells that produced as high as from 1,000 to 3,000 barrels at the start when drilled in. The Hidy, Graves and Grisell farms were large producing properties. After the rush of the drill at Pennville, the venture on the Hannah M. Harris farm, in the north-west corner of Penn township, was drilled in and started what was later known as the famous Harris pool. This pool was also a large producer of crude during its early history. Then came the gushers that were found on the McCollister and other farms in Jackson township, same county, which helped materially to hoist the average daily production of Indiana. The old Nottingham pool, in Nottingham township, Wells county, and the Montpelier pool, in Chester and Jackson township, in Blackford county, go to make up what was the great producing centre of the Indiana fields during the early nineties. Adams county must also be remembered as at one time a fine producing proposition, but now all this territory has nothing but strippers, but they are connected to power, are still making money for their owners, and may continue so for years to come.

Despite the fact that 25 per cent of the oil produced in the Illinois field can not be handled at this time, there is a large amount of work under way and starting. It is stated that the first eight-inch pipe line from the field to Montpelier, Ind., will be completed by the middle of December and the second early next year. It is thought with these two lines of operation between 40,000 and 50,000 barrels of production can be handled each day. Operators are looking forward to the pipe line company's ability to take care of all of the oil produced, and for that reason are drilling wells and shutting them in. Once the oil can be transported from the field these wells will be opened up and there will be an immediate increase in production.

In experimental work, Lawrence county, located at the south-eastern extremity of the oil development, is far in the lead. Bridgeport is the centre, and Pretty township is shewing the greatest number of large wells. In the opinion of some, the development in this township will rival the Shire pool, in Crawford county. The average size of the wells may not be so large, but the producing area of the field is expected to exceed the Shire pool.

Considerable interest attaches to the discovery which has just been made near Caddo Lake, 25 miles north of Shreveport. Two jealous villages are striving for supremacy as the headquarters for this new development — Annanias and Caddo city — three-quarters of a mile apart, on the Kansas City Southern Railroad. A lagoon, part of the Caddo lake system, nearly surrounds a tract at Pine Island, located two miles east of the railroad. On this island Messrs. Sharp, Hardy and several associates started a test a year ago. During the progress of the work the Producers' Oil Co., the producing branch of the Texas Co., became interested in the property, and is now practically conducting operations. At a depth of about 2,200 feet, in a 2½-inch hole drilled with a rotary, a formation was found that is producing considerable oil.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	$\frac{9}{16}$ - $\frac{11}{16}$
Baku Russian Petroleum ..	£750,000 Ord.	£1	3/3-3/9
Bibi-Eybat Petroleum Co. ..	£650,000 5½% Pref.	£1	5/6-6/0
Californian Oilfields ..	£250,000 Ord.	£1	7/9-8/9
Commonwealth Oil Co. Pref.	10/- paid up		5-5½
Def. £1 fully paid			$\frac{19}{32}$ - $\frac{21}{32}$
European Petroleum ..	£550,000 Pref.	£1	2½-2½
" " ..	£550,000 Ord.	£1	1/6-2/6
" " ..	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6½% Pref.	£1	78-81
Schibaieff Petroleum ..	£600,000 Ord.	£1	11/0-12/0
Shell Transport & Trading ..	£575,000 6% Pref.	£5	11/0-12/0
Spies Petroleum Company ..	£575,000 Ord.	£1	2½-2½
	£2,000,000	£1	6/6-7/6
	£1,000,000 Pref.	£10	29/6-30/6
	£312,500	10s.	9½-9½
			6/6-10/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on November 19th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	532	537
Balakhany Naphtha Co. ..	250	—	—
Caspian Society	1,000	4,600	4,650
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" ..	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	169	172
Neft Co.	250	—	—
Nobel Bros.	5,000	8,800	8,900
" "	250	435	—
Rops and Co., V.	250	—	—
Russian Naphtha Co. ..	250	—	—
Society Mazout	250	—	—
Tumaleff & Co., J. G. ..	250	—	—
Volga-Caspian Naphtha and Trading			
Co.	250	—	—
" " " (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8½ pd	£199,750	£10	23½
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Burmah Oil, Ord.	£1,100,000	£1	59s. 6d.
Do. Pref.	£250,000	£1	25s. 4½d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	7½
Do. 5% Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd.)	£45,000	£10	42s. 9d.
Do. New (£8 10s. pd.)	£131,750	£10	42s. 9d.
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	6½
(17s. paid)			
Do. 6% Cum. Pref. ..	£100,000	£10	12½
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	37s. 0d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	77s. 6d.
Do. "B" Deb.	£150,000	£100	162½

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	—	—	1,000
Aurora " " (Deb. 5%)	93½	94	—
Campina Poiana Mij.	—	18½	—
Dordtsche Petroleum Mij. (Pref.) ..	129½	128	500
" " (Deb. 4½%)	101½	101½	1,000
Elzasser Petroleum Mij.	1½	2	1,000
Gaboes " "	—	—	—
Holl. Rumeensche Petroleum Mij. ..	32½	35	1,000
Int. Rum. Pet. Mij.	108½	110	500
Java Petroleum Mij. (Ord.) ..	—	—	1,000
" " (Pref.)	—	—	—
Koninklyke Nederl. Pet. Mij. Shares	716½	729	250-1,000
" " Share certificates	719	727	1,000
Mœara Enim Petroleum Mij. ..	133	133½	100
" " 1-1,000 Oblig. 5	102	101½	250-1,000
" Moesi Ilir " Petroleum Mij. ..	42½	42	—
Nederl.-Rumeensche Petroleum Mij.	—	17½	—
Nieuwe Ned. Petroleum Mij. And...	—	55½	1,000
Oliebronnen in Hannover Mij. ..	130	135	—
" " (Deb. 5%)	—	98	—
Panolan Maatschappij Cert. ..	350	350	—
Perlak Petrol. Mij. (6% cum. pr. A.) ..	145½	143	1,000
" " (Common)	122½	122	—
Sumatra-Palembang Petroleum Mij	75½	75½	50
Zuid Perlak Petrol. Mij. (Pref.) ..	131½	134½	—

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matters of small moment indeed for the Russian industry.

During the past ten years, however, a complete change has overtaken the Caucasian petroleum industry, and year by year each succeeding auction has increased in its important bearing upon the future of the development, until to-day over one-half of the production of the Baku fields is obtained from Government lands. But the trend of events in the past in this direction unmistakably shews what the future has in store. For the most part the future developments are bound to be upon land owned by the Government, for, following the natural order of things, the older territories are becoming exhausted as time goes on, and so, as the representatives of the Baku producers aptly explained to the Conference at St. Petersburg the other week, they will before long have to rely upon Government land for the greater portion of their production.

Thus then the question of the royalties paid by the producers to the Government upon land leased from the State immediately becomes a subject of the greatest importance, for if the royalty takes the form of a heavy tax upon the producer, then the whole industry suffers to a great degree, and the hands of progress are considerably impeded. There is a great deal to be said against the present system adopted by the Government in leasing out their petroliferous lands, for the constantly-increasing royalties which the large producing firms are willing to pay to the Government serve only to tighten the screw which threatens now and again to wipe the Russian petroleum industry out altogether.

In normal times, reckoning depreciation of plant, working expenses and a hundred and one things that have to be taken into consideration, every pood of oil produced costs the producer at least seven copecs, and so it will be easily seen that when an exorbitant royalty has to be added—which, as a result of the recent auctions, works out in some cases at over 70 per cent.—the chances for the advancement of the petroleum industry are at the very commencement nipped in the bud, and rendered almost a matter of impossibility. We have heard a great deal in the past of the absurdity of ridiculously high royalties being offered for Government land in Baku, but never have these amounted to anything like the sums which we record elsewhere in this issue. For the present, it may be that large producers will not feel the full disadvantages attendant upon their rash bidding, inasmuch as the new high royalties will, to some extent, be counterbalanced by the fact that they are obtaining a large production from plots which pay only a reasonable royalty, but in the long run the effect will be felt in its full force, and then—though perhaps long before—the suicidal policy, which the few large producers have created, will be manifest.

When we look to America, there we find what would have proved to everybody else an object lesson. The royalty basis upon production finds considerable favour in the States, and there is scarcely a producing district wherein an energetic search for petroleum is constantly proceeding on the basis of a royalty to the owner of the land. But with this vast difference to the principles adopted in Russia. The American operator pays a royalty of one-eighth of the production as the general rule, but in

no case does this exceed 20 per cent. —a figure which, it will be admitted, is reasonable, and not calculated to unduly tax the producer. He knows that if his oil is to find a market at all, then the cost of production must be kept at a low point, and if this is so in America, then how much more should it apply in Russia, where the vast interior trade, which forms the bulk of the industry, has all along been cramped only by the high prices.

To us it is exceedingly difficult to see the reason for what we cannot but call the mad policy of both the producers and the Government. In the case of the former, they must of necessity be directly interested in the expansion of the home as well as the export trade in refined products, but when this is crippled, apart from all other things, by that one great factor of high price, then the industry, slowly but surely, develops into a liquid fuel proposition only, in which the question of price will play even a more important part, if that were possible, than it does to-day.

On the other hand, it remains to be seen what advantage a short-sighted Government can find in leasing out its land at royalties which must almost double the cost of production, seeing that they themselves are large consumers. The producers, like the Government, may have some "method in their madness," but it is a fact which cannot be gainsaid that such a state of things as that which is bound to be brought about and felt more acutely as a result of the recent auctions conduces to a most unhealthy state of things, and one diametrically opposed to everything that aims at the prosperity of the industry. Had only Russia possessed a powerful organisation which could come to its assistance in times of need, and direct it from wrong paths, it would not occupy the deplorable position it does to-day. Its producers would not, on the one hand, be fighting amongst themselves as to who should pay the highest price royalty to the Government, while the latter would not have had the chance to cripple an important branch of its commerce by accepting royalties which must inevitably spell disaster to all concerned. Our readers, we are sure, will read the result of the recent Baku auctions with feelings of regret—regret that in these days of enlightenment and commercial advancement, the chief movers in the Russian petroleum industry should continue to uphold a policy which, when looked at from every point of view, is nothing less than suicidal.

THE BULGARIAN GOVERNMENT AND THE FLASH POINT.

The Bulgarian Government has recently issued an order prohibiting the importation into the principality of illuminating oils having a flash point below 25° C., tested by the Abel-Pensky apparatus under an air pressure of 760mm. This is intended to prevent the use in the country of easily inflammable oils. This order is in favour of the Russian importers and against their Roumanian competitors, whose oil is usually below the flash point mentioned above.

ANNUAL MEETING OF THE STEAUA ROMANA.

The annual meeting of the Steaua Romana took place on November 13th. The directors in their report to the shareholders admitted that the results for the past financial year had not been favourable. The main cause is the inadequate supply of electric power, which prevented them from considerably increasing their crude oil production. The latter amounted to 218,473 tons against 209,797 tons in the preceding year. This drawback has now been remedied. The treatment of crude oil at the company's refineries has increased from 185,761 tons in the preceding year to 229,416 tons in the year now concluded, but this quantity includes oil purchased from other producers. The exports of products has also increased. Whilst the price of benzine, thanks to a growing demand, has increased, the hopes of a better market for illuminating oil, owing to a reduced output at Baku, have not been realised. The competition between American, Russian, Galician and Roumanian exporters for the European markets has continued, and the company has incurred considerable losses thereby.

An arrangement has now been come to between the principal Russian producers and the Petroleum Produkte A.G., which has the sale of the company's products, to eliminate future competition. A new company has been formed under the title of European Petroleum Union, which will have the exclusive right of marketing the products of the firms participating in it, and take over the storage installation and transport facilities possessed by the latter. The Steaua Romana will participate in this new concern to the extent of 5,000,000 marks. This arrangement is expected to produce favourable results in the near future.

The company has increased their holdings in the Société Roumaine pour l'Industrie et le Commerce du Pétrole, so that they now hold nearly the whole capital of that concern, from which the company holds on lease some of its properties.

In order to create a reserve of petroliferous land for future development the company has acquired, for a sum of 394,253 francs, concessions over an area of 20,398 acres, which brings a total area of petroliferous lands owned by the company up to 53,540 acres on 30th April, 1906; since then some further 22,500 acres have been taken up, bringing the total up to more than 75,000 acres.

The company's property at Baicoi, of an area of 2,220 acres, has, by striking of a prolific spouter, greatly increased in value.

For the development of the company's business a sum of 5,770,272 francs has been expended on the development of the oil lands, and 4,051,303 francs on increasing the facilities for refining, storing, and transporting petroleum products. In addition to the construction of the refinery at Campina, there may be mentioned the provision of water supply at Doftana, the purchase of a fleet of tank vessels for the Danube trade, and storage installations at Budapest and Ratisbonne.

The company has retained its premier position in the

Roumanian petroleum industry, having furnished one-third of the total crude production, and realised 40 per cent. of the total exports.

The value of the company's installations stands in the balance sheet at 23,080,934 francs against 15,153,003 francs in the preceding year. The company's oil lands stand at 10,836,140 francs, which is about the same as last year.

The gross profit on the year's trading is 5,263,797 francs, from which a sum of 3,805,960 francs has to be deducted for general expenses, interest, and depreciation of plant and property, leaving a net profit of 1,457,836 francs. Out of this net profit the directors propose to distribute a dividend of 6 per cent. on the capital of 24,000,000 francs, of which 17,000,000 rank for 12 months, and 7,000,000 francs for 5 months only. This will absorb 1,195,000 francs.

The meeting approved the report and balance sheet as well as the proposals of the directors about the disposal of the net profit.

THE WORLD'S OIL PRODUCTION IN GALLONS.

The production of the world's oil fields in imperial gallons during last year, as compared with 1902, was as under:—

	1905	1902
United States	4,580,397,720	3,080,751,144
Russia ...	1,868,649,182	2,738,261,530
Sumatra, Java and Borneo	264,112,000	199,240,000
Galicia ...	196,020,778	140,883,406
Roumania ...	150,313,558	70,037,790
India ...	140,661,332	54,990,342
Japan ...	45,599,338	40,725,200
Canada ...	21,599,230	16,041,216
Germany ...	19,012,742	12,040,000
Peru ...	1,282,480	2,040,000
Italy ...	850,000	643,722
All others ...	1,020,000	884,000
Total ...	7,299,538,358	6,295,897,266

India last year produced not 30 per cent. of the total yield, as has been stated in the daily press, but 18 of the world's production.

THE PETROLEUM PRODUKTE ACTIEN GESELLSCHAFT.

RESULTS OF OPERATIONS.

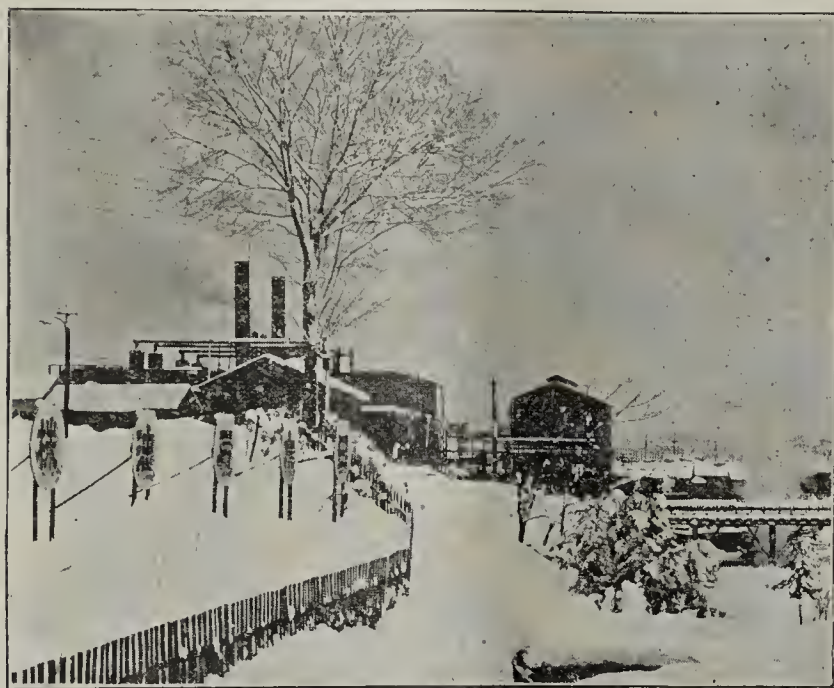
The balance sheet of the Petroleum Produkte Actien Gesellschaft, the marketing organisation for the petroleum concerns controlled by the German banks, for the financial year ended 30th April, 1905, shews a net profit of 146,985 marks, against 494,284 marks in the preceding year.

The assets of the company consist of cash at bankers, 53,013 marks against 23,834 in the preceding year; installations and materials, 5,477,501 marks against 5,263,505; investments, 5,382,161 marks, which is the same as last year; advances on goods, 5,614,784 marks, against 3,911,878 marks; refinery at Baku, 1,558,800 marks, which does not figure at all in the preceding balance sheet; debtors, 7,242,089 marks against 6,359,193 marks; other liabilities include creditors for 12,489,052 marks, against 8,134,450 marks.

HOW JAPAN WILL FOSTER HOME REFINED OIL.

THE ERECTION OF A TARIFF WALL.

From the first of the present month Japan, we learn, has imposed a duty of 9 cents per gallon on imported refined oils, this step being taken in order to encourage the refining of petroleum in that country. The new duty strikes an almost fatal blow at the importation of American refined oils into Japan, though there is no doubt that Japan's crude oil trade with America—and especially with California—will receive a very great



A TYPICAL JAPANESE REFINERY.

impetus by the imposition of this prohibitive duty. Steps are already being taken for the construction of a number of refineries in Japan, as we mentioned in the REVIEW a few weeks ago, the first Government refinery will be in operation early next year. Altogether, it is said, that at least half-a-dozen new refineries will be constructed, but for the time being it is rather premature to dwell upon this matter. As is known, however, some very large contracts for crude oil have been placed in California, one of these being for no less than 20,000,000 barrels. Contracts have also been placed for the construction of five large tank steamers in Japan which will

be used in the transport of crude oil from California to the Orient, these steamers being built with the assistance of a Japanese subsidy.

The *Oil Investor's Journal* learns that Mr. Avery, the assistant general manager of the Toyo Kisen Kaisha Steamship Co. of Tokio has recently returned to Japan after spending a considerable time in the United States arranging for oil burning equipments for steamships.

In view of the determined attempt of the Japanese Government to foster the refining of oils in that country, it is interesting to mention that, in all, there are about 100 refineries in Japan, but with the rapidly growing import trade of petroleum products, little headway has been made of late with the home oil refining industry. This remark also applies to the production of crude petroleum in the Japanese oil fields. Four years ago, Japan produced 171,000 tons of crude oil, at which figure it stood for the following year. During 1903 the total production rose to 201,700 tons, but again last year it fell to 191,600 tons, and it is doubtful if this latter figure will be greatly increased during the year.

On the other hand, however, the petroleum imports from the United States, as well as those from Sumatra, have been considerably increasing, the yearly average from the United States for the past four years working out at 44,000,000 gallons of illuminating oil, 1,800,000 gallons of lubricating oil, and 72,800 gallons of naphtha.

We hope in the course of a few weeks to deal more exhaustively with this new move on the part of the Japanese Government which is intended to build up a large trade at home in home refined petroleum.

PRODUCTION OF DUTCH COMPANIES.

The production of the Panolan Co. in October amounted to 62,205 cases of refined oil. During the first 10 months of 1906 this company produced 513,522 cases of refined oil.

The Moesi Ilir Co. in October produced 47,000 units of illuminating oil, whilst during the first 10 months of 1906 they produced 217,374 units.

In connection with the Royal Dutch Co. it may be mentioned that Mr. R. Middelberg has accepted an appointment in connection with their interests in Roumania.

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A PIONEER OF THE PETROLEUM INDUSTRY.

MR. DAVID ALEXANDER SUTHERLAND, F.I.C.

The subject of our sketch—Mr. David Alexander Sutherland, F.I.C., etc., of Victoria Mansions, 26, Victoria Street, Westminster, is one of those gentlemen who could be classed as a pioneer in connection with the petroleum industry. Born in 1863, Mr. Sutherland was educated at the Edinburgh University, becoming Demonstrator on Chemistry at the Edinburgh School of Medicine, Assistant to the late Dr. Wallace, City Analyst of Glasgow, Research Assistant under Prof. E. J. Mills, D.Sc., F.R.S., "Young," Chair of Technical



Chemistry, Glasgow, Research Assistant, Glasgow University, Works Chemist and Assistant Manager to the Clippen's Oil Co., Ltd., Johnstone, N.B., in the early days of his professional career. He subsequently became Consulting Chemist and Assistant Manager of the Burntisland Oil Works, N.B., and practised for some time as a Consulting Chemist and Metallurgist at Whitehaven, Cumberland, being at the same time Lecturer on Chemistry and Metallurgy to the Whitehaven Scientific Institute and Aspatria College, Carlisle.

In 1889 he was joined in partnership by the late Mr. G. J. Snelus, F.R.S., and came to London to take charge of the chief office of the firm. This partnership lapsed in 1893, since when Mr. Sutherland has practised alone as a consulting engineer and chemist and expert on petroleum at his present address, having also offices in the Equitable Building, Sydney, New South Wales. He has been engaged advising on the treatment of oil shale in Great Britain, France, and Australia, and for many

years on petroleum properties in Russia, Roumania, Galicia, Canada, United States of America, Central America, and elsewhere. Mr. Sutherland acts personally as consulting engineer and general manager to the Commonwealth Oil Corporation, Ltd., and in this capacity he is responsible for the design and construction of their extensive works in Australia, including railway, electric power plant, crude oil and refining works, sulphuric acid works and other installations.

His firm, known as D. A. Sutherland, act as consulting engineers and managers of oil and mining companies in various parts of the world, Mr. Sutherland's representative in Australia being Mr. Henry Deane, M.I.C.E. Mr. Sutherland is a Member of Council of the Institute of Chemistry, and of numerous other professional societies, as well as being the author of "The Petroleum Industry of Roumania," and numerous papers on petroleum, bitumen, etc.

Mr. Sutherland, we might add, left England yesterday for Egypt, to report on Petroleum concessions there, and subsequently proceeds to Australia, to superintend the great developments in connection with the Corporation with which his name is now so closely associated.

LATEST FROM THE GROSNY FIELDS.

From November 8th to the 10th, well No. 72, on plot No. 22 of the Akhverdoff Co., was spouting water from a depth of 1,795 feet. This well is situated in the vicinity of wells Nos. 24 and 62, both of which have been spouting intermittently, the first from March, 1904, and the second from February, 1905. In the new well the water was shut off, and its re-appearance must be explained either by its breaking through the cement, or ascending in cracks in the strata. In view of the danger of flooding the oil horizons, the Technical Committee has been invited to investigate the matter. Opposite this well, on the adjoining plot of the Anglo-Russian Maximoff Co., in a well drilled to 2,177 feet, no sand and no gas was encountered.

At the time of writing there was no information to give *re* the forthcoming conference of the Grosny petroleum producers.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended 10th November was 240,000 poods, or 3,869 tons; and for the week ended 17th November 241,000 poods or 3,885 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended November 11th was 291,000 poods, or 4,692 tons; and for the week ended 18th November, 301,000 poods, or 4,853 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 11th November was 112,810 poods, or 1,819 tons; and for the week ended 18th November, 114,805 poods, or 1,851 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 11th November was 132,517 poods, or 2,136 tons; and for the week ended 18th November was 144,035 poods, or 2,322 tons.

OCTOBER DEVELOPMENTS IN THE PENNSYLVANIAN FIELDS.

The statistics for October generally shew the first sign of the approach of winter by a decrease in boring activity, but this year this has been less pronounced than formerly, while in the fields of Illinois and Kansas the operations were even more active than for some months.

There was a very heavy slump, says the *Oil City Derrick*, in the new production of high grade oil during the month, consequent upon the failure of West Virginia and South-eastern Ohio to supply any wells of the gusher stripe. The only well of a sensational character discovered was located in Venango county in the old Bullion district, which was made famous by the celebrated Big Injun strike of 30 years ago. This well started off at Gusher speed, and is the biggest strike known in the county since the days of the Tarkill excitement.

West Virginia completed 19 more wells in October than in the preceding month, but the new production declined 475 barrels, and there was a slight decrease in the new operations. During September there was a large decline both in wells completed and new production, while in rigs and wells drilling decided gains were made.

There has been no change in the situation of affairs prevailing in the Lima oil fields of North-western Ohio and Indiana. Operations continue to decline and there is nothing in sight that promises to bring about an increase in field activity. The territory now being drilled is largely within defined limits, and nothing but wells of very small calibre are expected. The October record shewed 188 wells completed, including 26 dry holes, while the new production footed up 1,831 barrels. This was a decrease from September of 46 wells completed and 236 barrels production, with a gain of three dry holes.

The Eastern oil fields, which include the developments in New York, Pennsylvania, West Virginia, Ohio, Indiana, Illinois and Kentucky, completed 1,340 wells in October, including 251 wells that were unproductive of oil in paying quantities. The new production summed up 19,656 barrels. Compared with September there was a loss of 27 wells completed, with a gain of four dry holes and 1,664 barrels production. In September 1,367 wells were completed, and 247 of them unproductive, and the new production figured up 17,992 barrels. On the last of October the Eastern field contained 461 rigs and 1,078 drillings, which was a decrease of two rigs and 37 wells drilling from the record of September 30th.

The total new production of high grade oil amounted to only 3,628 barrels in October, of which 1,630 barrels, or about 45 per cent., came from the oil fields of West Virginia. South-Eastern Ohio produced 716 barrels or

about 20 per cent., while the remaining 1,282 barrels or 35 per cent. came from the oil-producing sections of New York and Pennsylvania. This represents a considerable change in the aspects of the oil regions, as heretofore the yield from the sections north-east of the State line between West Virginia and Pennsylvania has been of small importance.

Notwithstanding a largely announced shut-down movement in the Illinois oil field, operations have continued very active, and October registered a gain over September in new wells, new production and new operations. While a large number of wells have been drilled down to the producing formation and shut in, there has been little abatement in the efforts to extend the producing area of the field. With improved facilities for handling the oil, there will come an enormous increase in new production.

There were 453 wells completed in the Illinois oil field during the month, including 47 dry holes, and the new production was 14,039 barrels. This was a gain of four wells and 4,334 barrels production over September, and a decrease of 22 in the number of dry holes. A decline of 12,727 barrels in the new production was recorded for September, but in Crawford county alone there were 66 wells shut down on top of the sand.

The wells completed during the month in the various districts were as under:—

	Completed.	Production.	Dry.
Pennsylvania	678	3,628	172
Buckeye	113	1,165	8
Indiana	75	666	18
Illinois	453	14,039	47
Kentucky	21	158	6
Total	1,340	19,656	251

LATEST NEWS FROM THE CALIFORNIAN FIELDS

According to the latest information from the Californian oil fields, it would appear that the quantity of oil in storage is rapidly decreasing, and it is estimated that by the end of the year stocks will have decreased by about 50 per cent. For the most part, the present stored oil is in the Kern River field, but even here the stocks above ground are 30 per cent. less than they were at the commencement of the year. So far as the other producing fields are concerned—Santa Maria, Coalinga, Los Angeles, Whittier and other localities—the stocks above ground are already exhausted, the reason for this being that the consumption of oil in California is increasing to such a great extent. In some of the territories, operations have been minimised until better prices are obtainable, and this curtailment is already having its effect, for prices are stiffening, even for contracts ahead for two or three years.

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The Petroleums of North America.

By Mr. CLIFFORD RICHARDSON.

Being a Comprehensive Account of the Constituents of American Petroleum.

It appears that the residue contains a certain amount of hydrocarbons or their derivatives which are volatile at 205 degrees when exposed to this temperature in an open dish, and that if this exposure is continued for a certain length of time, a brittle pitch is left. This pitch is no doubt formed by condensation due to the severe treatment to which the oil has been subjected, and is not present as such in the crude petroleum. The residue carries a considerable percentage of solid paraffins which can be separated by the Holde method, as modified by the writer. The amount, at least in industrial products, would depend upon the manner in which the distillation has been carried out. If a plentiful steam agitation is employed, a part of the paraffin scale will be carried over into the distillate. The amount of fixed carbon obtained on ignition is very small, only three per cent., a characteristic which differentiates the residuums from paraffin petroleum from those obtained from the asphaltic oils of California, as will appear later.

It is also worthy of note that of the hydrocarbons present but from 10 to 25 per cent. are in a form involving a double bond, since this is the amount removed from a naphtha solution of the residue on treatment with strong sulphuric acid.

A certain light is thrown therefore on the characteristics of the denser portion of the Appalachian petroleum by means of these determinations.

In *resumé*, it appears from the preceding data that the paraffin petroleum of the Appalachian field consist of small amounts of monocyclic, aromatic and polymethylene hydrocarbons, which have been separated in such a degree of purity as to be identified definitely; of minute traces of sulphur and nitrogen compounds and, predominatingly, of paraffin hydrocarbons from isobutane, C_4H_{12} to $C_{35}H_{72}$, the members above 14 being solids at ordinary temperatures. Polycyclic hydrocarbons of the C_nH_{2n} series are also present in very considerable amounts from C_{21} to C_{26} , the constitution of which is not understood, but which are quite different from the hydrocarbons of the same relation of carbon and hydrogen found in asphaltic oils, and have no relation to the ethylene or olefine series. Polycyclic hydrocarbons of the C_nH_{2n-2} series are also present in the fractions boiling above 290 degrees, at 50 mm. The latter two classes of hydrocarbons are worthy of careful study. They are saturated, in that they are not acted upon by strong sulphuric acid, and are all sharply differentiated from the hydrocarbons of the asphaltic petroleum of California by their physical properties. The opportunities for investigation in this direction are large, but the problem is an extremely difficult one.

Ohio-Indiana Field.

Before 1885 the main supply of petroleum on the continent of North America was derived from the Appalachian field, the oil-bearing strata not being of greater antiquity from a geological point of view than the lower Devonian. In that year a new field was developed in the North-Western part of Ohio, the oil occurring in Trenton limestone of lower Silurian age.

This, although a paraffin petroleum, differs essentially from the paraffin petroleum of the Appalachian field, in that it is denser, contains a larger amount of sulphur, including hydrogen sulphide, which gives it a very bad odour, and yields a much smaller amount of distillate suitable for illuminating purposes.

According to Mabery the density of the petroleum from the Findlay and Lima fields varies, in the former case from .8194 to .8296, 40 degrees B., to 38.8 degrees B., and in the latter from .8243 to .8510, 32.8 degrees to 34.5 degrees B. The ultimate composition of the oil shews a smaller percentage of carbon, 84.57 per cent., as might be expected. The percentage of distillates which

he obtained from the crude petroleum of Pennsylvania and North-western Ohio, with their densities, compare as follows:—

Pennsylvania.			Ohio-Indiana.		
Fraction.	Parts in 100.	Spec. Grav.	Fraction.	Parts in 100.	Spec. Grav.
120-150°	19.70		100-150°	9.75	.7282
150-220	8.84	.757	150-200	16.63	.7669
200-250	15.23	.788	220-257	10.75	.7940
250-320	20.70	.809	257-300	9.75	.8131
			300-350	8.63	.8242
Total	64.47			55.51	
Residue	35.52			43.00	

It will be noted that the distillates coming over below the boiling point of nonane, 151 degrees, amount to 20 per cent. of the Pennsylvania and only 10 per cent. in the Ohio oil, and that all the distillates from the latter are denser than those from the Pennsylvania oil.

Mabery has made an elaborate study of this petroleum and has detected the paraffin hydrocarbons, C_nH_{2n+2} from butane, C_4H_{10} , boiling at 0 degrees, up to and including a decane, $C_{10}H_{22}$, boiling at 173 degrees, and corresponding to those found in the Pennsylvania petroleum. Above this the liquid members of this series fail. The solid paraffins occur, however, in a greater proportion than in the Pennsylvania oil, as they are present and separate out on cooling from all distillates above above 150 degrees at 30mm. pressure. These solid paraffins have been assumed by Mabery, and probably correctly, to be identical with those found in the Pennsylvania oil. Above $C_{11}H_{24}$ saturated hydrocarbons are found which on separation from the solid paraffins by freezing, correspond to the general formula C_nH_{2n} , with 12, 13, 14, 15, 16 or 17 atoms of carbon, having the following boiling points, specific gravities, and index of refraction:—

HYDROCARBONS SEPARATED FROM OHIO-TRENTON LIMESTONE PETROLEUM.

Series.	Symbol.	Boiling point.	Pressure.	Spec. Grav.	Refrac. Index.
C_nH_{2n}	$C_{12}H_{24}$	211-213°	At pressure	.7970	1.4350
C_nH_{2n}	$C_{13}H_{26}$	223-225	At pressure	.8055	1.4440
C_nH_{2n}	$C_{14}H_{28}$	138-140	30mm.	.8129	1.4437
C_nH_{2n}	$C_{15}H_{30}$	152-154	30mm.	.8204	1.4800
C_nH_{2n}	$C_{16}H_{32}$	164-168	30mm.	.8254	1.4514
C_nH_{2n}	$C_{17}H_{34}$	177-179	30mm.	.8335	1.4545

When the carbon atoms reach 19 in number and up to and including hydrocarbons having 21, 22 and 24 atoms, the relation to carbon to hydrogen corresponds to the general formula C_nH_{2n-4} .

Series.	Symbols.	Boiling point.	Pressure.	Spec. Grav.	Refrac. Index.
C_nH_{2n-2}	$C_{19}H_{36}$	199-202°	30mm.	.8364	1.4614
C_nH_{2n-2}	$C_{21}H_{40}$	213-217	30mm.	.8417	1.4650
C_nH_{2n-2}	$C_{22}H_{42}$	224-227	30mm.	.8614	1.4690
C_nH_{2n-2}	$C_{24}H_{46}$	237-240	30mm.	.8639	1.4715

The hydrocarbons with 23, 24 and 25 atoms of carbon correspond to the general formula C_nH_{2n-4} .

Series.	Symbol.	Boiling point.	Pressure.	Spec. Grav.	Refrac. Index.
C_nH_{2n-4}	$C_{23}H_{42}$	253-255°	30mm.	.8842	1.4797
C_nH_{2n-4}	$C_{24}H_{44}$	263-265	30mm.	.8864	1.4802
C_nH_{2n-4}	$C_{25}H_{46}$	275-278	30mm.	.8912	1.4810

It appears from the preceding data that the saturated C_nH_{2n} hydrocarbons of the higher boiling point begin at a much lower number of carbon atoms than in the case of the Pennsylvania oil. The same can be said of the saturated hydrocarbons C_nH_{2n-2} , while hydrocarbons of the series C_nH_{2n-4} are present which are not found in the Eastern oil. They correspond physically and chemically with those found in the asphaltic petroleum from Texas and California, and in the lighter distillates from the solid bitumens, such as Trinidad asphalt, as may be seen from a comparison of the characteristics of the three latter

materials, of about the same boiling point, with the C_nH_{2n-4} hydrocarbons in Ohio oil:—

	Trinidad Asphalt Distillate.	California Distillate.	Beaumont, Texas, Distillate.
Boiling point ..	300-310°	265-270°	293-317°
Specific gravity ..	·8,914	·8,860	·8,879
Refractive index ..	1·4,815	1·4,860	1·4,843
Carbon ..	85·98%	86·59%	85·95%
Hydrogen ..	13·62%	13·32%	13·48%

Mabery has also found a much larger percentage of aromatic hydrocarbons in Ohio oil, and mentions the occurrence of benzol, totuol and mesitylene boiling at 168 degrees and the higher homologues, including cumol, psuedocumol, durol, isodurool, cymol, isocymol and doubtless others of even higher molecular weight.

The naphthenes or monocyclic polymethylenes are also found in Ohio oil to a very considerable extent, but have not been separated in detail.

With these data alone it is evident that Pennsylvania and Ohio oils are of quite different character, aside from the presence of the larger amount of sulphur derivatives in the Ohio oil and of asphaltic hydrocarbons containing 23, 24 and 25 atoms of carbon.

The sulphur compounds have not been isolated, but are probably of the same nature as those occurring in Canadian petroleum.

In the same way, as in the case of the Pennsylvania petroleum, the residue from the distillation of oil from the Ohio field has been examined by the writer with the following results:—

PHYSICAL PROPERTIES.				
Specific gravity, 25/25° ..	..	..	..	·9,318
Flash ..	..	..	..	224°
CHEMICAL CHARACTERISTICS.				
Loss, 160°, 7 hours ..	..	..	..	3%
Character of residue ..	..	..	..	Soft.
Loss, 200°, 7 hours (fresh sample) ..	..	..	..	7·4%
Character of residue ..	..	..	..	Soft.
Bitumen soluble in CS_2 , air temperature ..	..	..	..	99·4%
Organic matter insoluble ..	..	..	..	·6
Inorganic or mineral matter ..	..	..	..	·0
				100·0
Bitumen insoluble in 88° B. naphtha, air temperature—pitch ..	..	..	..	3·8%
Per cent. of soluble bitumen removed by H_2SO_4 ..	..	..	..	17·0
Per cent. of total bitumen as saturated hydrocarbons ..	..	..	..	83·0
Per cent. solid paraffins ..	..	..	..	11·4%
Fixed carbon ..	..	..	..	3·7%

From the preceding results it appears that there is no such striking difference between the two residues as might be expected from the difference in the character of the oil in which they have originated. That from the Ohio oil contains about the same amount of unsaturated hydrocarbons removed by acid; and of paraffin scale, while it yields 1 per cent. more of fixed carbon. The density, as might be expected, is somewhat higher.

From the preceding data it is evident that the oil of the North-western Ohio field may be classed as a paraffin petroleum, but that it differs essentially from that of Pennsylvania in the nature of the liquid hydrocarbons of which it is made up, especially in the presence of asphalt hydrocarbons. It also contains larger amounts of naphthenes, or monocyclic polymethylenes, of aromatic hydrocarbons, of unsaturated hydrocarbons and of sulphur derivatives.

Canadian Field.

Petroleum occurs in the Province of Ontario, Dominion of Canada, in the corniferous limestone, of a character somewhat resembling that from the Ohio-Indiana field, as it contains sulphur, although in a rather larger amount, 1 per cent., as compared to six-tenths of 1 per cent. It has a very considerable higher density, ·84 to ·88, 36·7 degrees to 29·1 degrees B. It has been closely studied by Mabery, who find that in ultimate composition it compares with Ohio oil as follows:—

	Canadian Per. cent.	Ohio. Per. cent.
Carbon ..	83·94	84·57
Hydrogen ..	13·37	13·62
Sulphur ..	·99	·60
	98·30	98·79

The comparative yield of distillate from the two oils is presented by Mabery as follows:—

CANADA. (Petrolia.)					
Boiling Point.	Per cent.				Spec. Grav.
100-153°	2·75	·7670
150-200	7·80	·8026
200-250	9·50	·8228
250-300	5·10	·8345
Total	28·25	—
Residue	70·12	—
OHIO.					
110-150°	9·75	·7282
150-220	16·63	·7669
220-257	10·75	·7940
257-300	9·75	·8138
300-350	8·63	·8242
Total	64·48	—
Residue	43·00	—
PENNSYLVANIA.					
120-150°	19·70	—
150-200	8·85	·757
200-255	15·23	·788
255-320	20·70	·809
Total	64·48	—
Residue	35·55	—

From the preceding figures it is very evident that the Canadian petroleum contains a very much smaller percentage of hydrocarbons distilling at comparatively low temperature than either the Ohio or Pennsylvania oil.

In the Canadian, as in the Ohio oil, the liquid members of the series C_nH_{2n+2} stop with $C_{10}H_{22}$, but the proportion of those present is, of course, much smaller. Above this point the liquid hydrocarbons are poorer in hydrogen, and include the C_nH_{2n-4} and C_nH_{2n-6} series, of which the following were separated:—

	Boiling Point.	Pressure.	Sp. Gr. 20°	Refrac. Index.
$C_{12}H_{24}$	216°	760mm	..	..
$C_{14}H_{26}$	228-230	760mm.	·7979	1·444
$C_{14}H_{28}$	141-153	50mm.	·8096	1·449
$C_{15}H_{30}$	169-169	50mm.	·8192	1·452

The aromatic hydrocarbons have been shewn to be present in greater amount than in Pennsylvania or even Ohio oil. The sulphur compounds, owing to the larger percentage of sulphur present, are of much importance in affecting the character of the oil. Mabery has isolated those containing from 7 to 18 atoms of carbon corresponding to the general formula $C_nH_{2n}S$, having the following characteristics:

	Boiling Point	Sp. Gr. 20°	Refrac. Index.	Pressure.	Sulphur. Per cent.
$C_7H_{14}S$	158-160°	·8878	1·468	760mm.	24·61
$C_8H_{12}S$	167-169	·8920	1·486	760mm.	22·22
$C_8H_{16}S$	183-185	·8937	—	760mm.	22·22
$C_9H_{18}S$	193-195	·8997	1·4746	760mm.	20·25
$C_{10}H_{20}S$	207-209	·9074	1·4766	760mm.	18·60
$C_{11}H_{22}S$	128-130	·9147	1·480	50mm.	17·20
$C_{14}H_{28}S$	160-170	·9208	1·4892	50mm.	40·04
$C_{16}H_{32}S$	170-180	·9222	1·4903	50mm.	12·50
$C_{18}H_{34}S$	190-210	·9235	—	50mm.	11·27

Mabery has identified a number of the unsaturated hydrocarbons of the C_nH_{2n} series, obtained from sludge produced in the purification of the saturated hydrocarbons, as hexylene, heptylene and nonylene, the presence of which is of interest and which may possibly occur in smaller amounts in Pennsylvania and Ohio petroleum.

The naphthenes of monocyclic polymethylenes do not seem to have been isolated from Canadian oil, probably owing to the small percentage of light distillates which the petroleum contains.

(To be continued.)

AMERICAN NOTES

Transfer of Holdings.—It is announced that the Nineveh Petroleum Co., operating extensively in two counties, has sold its holdings to the South Penn Oil Co.

Fire.—The pumping station of the Tidewater Pipe Co. at Slate Run, Pennsylvania, has recently been destroyed by fire, which was caused by the explosion of a gas tank.

Mid-Continental Organisation.—A new organisation of the independent oil refiners of Kansas and Indian Territory has been formed as the result of a meeting recently held at Chanute. Its title is the Mid-Continent Oil Refiners' Association.

A New Kansas Refinery.—The National Oil Refining Co. Cleveland, Ohio, is building a refinery at Coffeyville, Kansas, which will have a capacity of 2,000 barrels per day. It is expected that the refinery will be in working order early next year.

Another Pipe Line.—The Pure Oil Co. is about to lay a pipe line from Pine Grove in Wetzel county to Marcus Hook, a distance of nearly 300 miles. It is anticipated that this work will necessitate an outlay of \$1,000,000, this sum having been voted for the construction.

In the Illinois Field.—With the approach of winter the development work in the Illinois field is decreasing considerably. It is expected that early next year this prolific territory will experience a boom, the like of which has not been known since the the days of the Spindle Top boom.

October Completions in Indian Territory.—The operations in the northern portion of the Indian Territory fields during October continues general. The total number of wells completed was just over 100, and the new production came to about 10,000 barrels. At the end of the month 100 wells were drilling.

Texas Mineral Survey May be Revived.—It is stated that the State Mineral Survey of Texas is about to be revived. It will be remembered that the last legislature refused to make an appropriation for the continuance of the survey, and so it passed out of existence, since which time, it is said, mineral development in Texas has lagged.

Canada.—A dispatch received from the mounted police in North-western Canada, states that a party are boring for oil on the Altrabarka River, under the leadership of a Mr. Bennet. They have a good plant and boring apparatus, and appear to be satisfied with the indications. It was hoped to strike a flow of oil before the winter sets in. About 15 miles below, another party has started operations, headed by Mr. Von Hammerstein.

A Deep Canadian Test.—The Canadian Pacific Railway is about to make a deep test at a spot in Canada known as Medicine Hat. In order to thoroughly test the ground, the well will be drilled to a depth of 4,000 feet if necessary, though in that part of Canada the deepest well so far drilled is about 1,000 feet. The situation of the test is north of Montona, near to where several wells have produced considerable quantities of oil and gas.

The Union Oil Company's Success.—It is stated that the Union Oil Co. of California is developing some good wells in the Santa Maria field, but the best of these are being capped until such time as the oil is needed. The Santa Maria field, by-the-bye, is said to be now producing no less than 40,000 barrels daily, but as yet the field is by no means developed in what are generally believed to be its richest portions.

Another Standard Pipe Line.—A message from Bartlesville states that the Standard Oil Co. is about to lay another pipe line from the Kansas field to Whiting, Indiana, which will make the third line laid to carry off the production of the Kansas and Indian Territory fields. When the first line was laid two years ago, it was generally believed that this would be sufficient for years, but, owing to the present congestion which the two completed lines have failed to remove, another is to be laid, and the possibility is that the new line may be extended to Whiting.

THE REFINING OF PETROLEUM IN THE UNITED STATES.

SIGNIFICANT FIGURES SHEWN BY A CENSUS.

A census has recently been completed in the United States dealing with the use of chemicals in the various manufactures which go to make up the industries of America, and one of the most interesting portions of this is that dealing with the refining of petroleum. The following tabular information, shewing the values of the various materials used in refining, together with the values and quantities of the various products received from refining, will be perused with great interest:—

	1905.	1900.
Materials used, total cost (dols.) ..	139,387,213	102,859,341
Crude petroleum—		
Barrels (42 gals.) ..	66,982,862	52,011,006
Cost (dols.) ..	107,487,091	83,424,207
Sulphuric acid—		
Short tons ..	162,152	1
Cost (dols.) ..	2,003,031	1
Caustic soda—		
Pounds ..	11,161,376	1
Cost (dols.) ..	208,440	1
Sulphur—		
Tons ..	888	
Cost (dols.) ..	13,380	21,735,782
Pyrites—		
Tons ..	20,671	3
Cost (dols.) ..	79,784	3
Coopers' and carpenters' materials (dols.) ..	5,628,274	3,576,943
Tinners' materials (dols.) ..	6,361,764	4,643,985
Barrels, cases and tin cans (dols.) ..	5,880,310	2,930,805
Fuel (dols.) ..	5,139,934	3,120,441
All other materials (dols.) ..	6,585,205	6,427,178
Products, total value (dols.) ..	175,005,320	123,929,384
Illuminating oils—		
Barrels (50 gals.) ..	26,897,984	25,171,289
Value (dols.) ..	91,366,431	74,694,297
Fuel oils—		
Barrels ..	7,281,584	6,095,224
Value (dols.) ..	9,205,339	7,550,664
Residuum—		
Barrels ..	2,514,198	595,615
Value (dols.) ..	3,138,361	688,455
Paraffin oils—		
Barrels ..	1,544,400	1,606,783
Value (dols.) ..	6,210,279	3,987,073
Reduced oils—		
Barrels ..	2,783,148	676,163
Value (dols.) ..	6,068,360	1,669,287
Neutral filtered oils—		
Barrels ..	504,042	608,185
Value (dols.) ..	1,942,153	2,256,626
Filtered cylinder oils—		
Barrels ..	1,366,661	565,894
Value (dols.) ..	9,332,299	3,443,491
Grease (lubricating, etc.)—		
Barrels ..	202,439	524,033
Value (dols.) ..	1,394,130	1,995,390
Naphtha and gasolene—		
Barrels ..	5,811,289	5,611,554
Value (dols.) ..	21,314,837	15,991,742
Paraffin wax—		
Barrels ..	794,058	774,024
Value (dols.) ..	10,007,274	7,791,149
Sludge acid—		
Short tons ..	165,104	2
Value (tons) ..	400,480	2
Coke and black naphtha (dols.) ..	149,653	176,281
All other products ..	14,475,669	3,684,965
Equipment:—		
Stills—		
Heated by steam ..	282	290
Heated by superheated steam ..	15	26
Heated by fire ..	1,610	1,458
Agitators ..	374	327
Chilling houses for paraffin ..	67	48
Hydraulic or other presses ..	311	510
Storage tanks—		
For crude petroleum—		
Number ..	304	257
Capacity (gals.) ..	245,760,493	0
For refined petroleum—		
Number ..	3,575	0
Capacity (gals.) ..	576,458,825	
Cooper shops ..	64	48
Tin shops ..	17	13

1 Reported as acids, alkalis and sulphur.

2 Includes value of sulphuric acid and caustic soda.

3 Not reported separately.

0 Not reported.

THE EUROPEAN PETROLEUM COMPANY, LIMITED.

ANNUAL MEETING.

The annual general meeting of the European Petroleum Co., Ltd., was held on Tuesday week, at Winchester House, Old Broad Street, London, E.C., Mr. H. Pike Pease, M.P., the chairman of the company, presiding.

The chairman, in moving the adoption of the report, which appeared in the last issue of the REVIEW, said the gross profits for the year had amounted to £44,675, from which must be deducted interest on debentures, etc., £32,355, provision for income-tax £370, making a total of £11,950, and leaving a balance of £11,950. As stated in the report, the board were of opinion that depreciation and wells renewal required a sum of not less than £65,000, and after this provision had been made the result of the year's working was a debit balance of £53,049. As he had the opportunity, a few months ago, of informing the shareholders at length in regard to the position of the company and the necessary issue of second mortgage debentures, he thought every one realised the very unfortunate position in which they had been placed by the state of Russia recently and at the present time. It was, therefore, not surprising to learn that the production of the company had suffered severely. The total output for the financial year amounted to 5,340,531 poods, as against 10,242,888 poods for the corresponding period of last year—a drop of about 50 per cent. This drop would not certainly have occurred under normal conditions. It was entirely the result of the present chaotic state of the country. With regard to Roumania, there was a satisfactory and steady increase in the royalty they received upon the production from the Americano-Romano Soc. He had nothing of interest to report with regard to Galicia. The heavy accumulation of stocks there would not tempt them to start work at present, if they were otherwise prepared to do so. With regard to the ships, they were all chartered and working at the present time. Speaking of the Thames Haven storage and refinery, the chairman said their lease was concluded the other day, and they had decided to work the refinery themselves. They had all the necessary plant, storage capacity for 17,000 tons, deep water jetty, railway sidings, etc.—in fact, they had every equipment for the economical handling of fuel oil, burning oils, or petrol in bulk. With regard to the future it was always dangerous to prophesy; but he thought that if they could only see a discontinuance of the strike, and the unfortunate conditions which at present existed were removed, they would be able to work satisfactorily in the country where their property was situated.

W. Ritter van Ofenheim seconded the motion.

The report and accounts were adopted, and the retiring directors and auditors were reappointed.

A vote of thanks to the chairman, the directors, and the staff in Baku concluded the meeting.

PEAT FOR FUEL PURPOSES.

INVESTIGATIONS BY DR. DVORKOVITZ.

In our last issue we referred at length to the relative positions of coal and oil fuel in America. Our attention is now turned to another important phase of the fuel question—that of the great possibilities for the use of peat for domestic and industrial purposes. About twelve years ago, Dr. Dvorkovitz made a careful investigation and examination of the various peat districts in Ireland, as a result of which he placed it on record that there are about 3,000,000 acres of peat bogs in that country, each of which has an average depth of about 20 feet. This, Dr. Dvorkovitz estimated, would yield at least 7 440,000,000 tons of peat suitable for fuel purposes. Investigations are now being conducted by Dr. Dvorkovitz with respect to the peat deposits of Germany and Holland, and upon this matter he will shortly publish a report. It is highly satisfactory to learn that a movement is now on foot to utilise the vast deposits of peat in both countries for fuel purposes.

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 22nd November, 1906, as follows:—

In our last report we called attention to the exceptional activity of the steel trade throughout the world. It has now become apparent that there is a positive scarcity of steel. The manufacturers in this country, although working full time, were hardly able to meet the demand—in Germany a like state of things prevails, and in America the position of steel is so serious that not only are the makers unable to meet the requirements of their home trade, but they find it impossible to fulfil their contracts for steel sold for export. In these circumstances, the Welsh tin plate manufacturers, having to face the probability of higher prices in the near future, have advanced their rates all round, and most of the large makers are now holding out for the under-mentioned prices for oil sizes:—

1C	18½ × 14	124 sheets	110 lbs.	15/-	per box.
1C	19½ × 14	120 "	110 "	15/-	"
1C	20 × 10	225 "	156 "	20/-	"

F.o.b. Wales. Tin lining and iron hooping extra.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO NOVEMBER 17th, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Nov. 5.	From Jan. 1.	Since Nov. 5.	From Jan. 1.	Since Nov. 5.	From Jan. 1.	Since Nov. 5.	From Jan. 1.	Since Nov. 5.	From Jan. 1.	Since Nov. 5.	From Jan. 1.	Since Nov. 5.	From Jan. 1.	Since Nov. 5.	From Jan. 1.
Austria ...	—	2,118,640	20,040	394,930	—	87,930	—	—	—	—	—	—	—	—	20,040	2,612,500
Belgium ...	—	370	26,380	457,278	—	11,000	—	—	—	5,300	—	—	—	5,367	26,380	468,315
Canada ...	—	—	—	47,460	—	56,400	—	—	—	—	—	—	—	200	—	104,060
Dutch India ...	—	480	—	960	—	192	—	—	1,805,400	13,494,530	1,692,000	1,693,010	—	1,920	3,497,400	15,191,092
Germany ...	14,560	6,398,380	79,990	1,282,393	—	—	—	—	—	2,380	—	—	—	16,962	94,550	7,701,195
Holland ...	—	10,180	440	3,360	—	9,440	—	—	—	1,446,673	—	271,000	7,440	83,240	7,880	1,316,13
Roumania ...	—	6,290,745	—	—	683,080	683,080	1,007,000	3,094,880	—	1,892,460	—	—	—	—	1,690,080	11,961,165
Russia ...	—	29,174,420	11,540	4,325,651	—	—	—	3,731,473	—	6,210	—	—	8,100	13,760	19,640	37,251,514
U.S.A. ...	3,227,120	85,063,085	1,194,610	35,752,001	1,800	670,968	2,442,510	40,476,698	189,390	7,490,120	—	9,072,430	42,440	1,792,344	7,097,870	180,507,556
Other Countries	—	1,655	210	32,942	—	—	—	—	—	4,130	—	3,840	3,140	217,550	3,350	260,117
	3,241,680	129,057,955	1,333,210	42,296,975	684,880	1,519,010	3,449,510	47,303,651	1,994,790	24,341,803	1,692,000	11,040,280	61,120	2,131,343	12,457,190	257,889,127

The American Oil Market.

New York, Week ended Nov. 10th.

Reports from the oil fields are not of an encouraging character and very meagre, and the production of crude at the new wells continues of a fair average volume. From the older producing sections conditions have not improved, says the *Oil, Paint and Drug Reporter*, and in most instances reports are not of a satisfactory character. Other sections still report small pumpers, and the percentage of dry holes continues large. In Mid-Continent fields during the past month there has been an unexpected increase in the runs as well as in the shipments of oil, but notwithstanding the former the increase in the stocks have been the smallest since the opening of the year. The production during October averaged about 64,000 barrels per day, and the deliveries about 50,000 barrels, which shew a material increase, leaving about 14,000 barrels to be stored. In Texas the production is decreasing and prices are firmer. Latest quotations revised for Texas oil are:—Batson 52@60c., as to gravity; Humble, 65c.; Jennings, 58c.; Saratoga, 60c.; Spindle Top, 68c.; Sour Lake, 50@64c., as to gravity.

REFINED AND PRODUCTS.—There has has been a light demand for refined for export during the past week. Conditions governing the market, however, have not changed to any extent. In Russia the situation remains as noted in our previous report, but position in Baku is quiet, and work there has been gradually assuming former conditions, and no further disturbances are expected. The engagements during the week aggregated 188,000 barrels.

The price for barrelled oil for export has remained steady at 7.50c. for New York loading, and at 7.45c. for Philadelphia loading. The principal foreign markets are steady. Freight rates are steady at 2s. @ 2s. 3d. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel. Home trade lots have been in good request and are firm on the basis of 10c. at 150 degrees water white from tanks, and 13c. in barrels.

Cases for export have been in light request, and sales of about 160,000 are reported. The price of plain tops has been steady at 10c. Freight rates are firm.

Crude for export has been in moderate request, and sales of about 35,000 barrels are reported. Last week, however, cases for export were not in request, and as a consequence, no sales were reported. Pennsylvania crude is quoted at 7.50c. in barrels.

Naphthas have ruled firm. For export, sales of 200 barrels have been reported as compared with 7,000 barrels reported last week.

CLOSING QUOTATIONS.

CRUDE.		Week ended	
		Nov. 3, 1906.	Nov. 10, 1906.
National Tran. Certificates	per bbl.	\$1.58@1.59	\$1.58@1.59
Pennsylvania crude in bbls.	per gal.	7.60	7.60
Pennsylvania crude in bulk	.. ..	4.50	4.50
Residuum, bbls. for export	.. ..	6@6½	6@6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were;—

		Week ended	
		Nov. 10, 1905.	Nov. 10, 1906.
Tiona .. ..	.. ..	1.68	1.68
Pennsylvania .. ..	.. ..	1.58	1.58
North Lima .. ..	.. ..	0.94	0.90
South Lima .. ..	.. ..	0.89	0.85
Indiana .. ..	.. ..	0.89	0.85
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.34	1.30

REFINED—FOR EXPORT.

		Week ended	
		Nov. 3, 1906.	Nov. 10, 1906.
Cargo Lots for export..	per gal. ..	7.50	7.50
In bulk .. ..	.. ..	4.40	4.40
Philadelphia loading ..	.. ..	7.45	7.45

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Nov. 3, 1906.	Nov. 10, 1906.
3,000 to 10,000..	.. ..	10.05	10.15
1,000 to 3,000..	.. ..	10.20	10.20

REFINED—JOBGING LOTS.

		Week ended	
		Nov. 3, 1906.	Nov. 10, 1906.
120 fire test, S.W.	per gal. ..	12	12
130 fire test, S.W.	.. ..	12½	12½
150 fire test, W.W.	.. ..	13	13
In bulk from tanks	.. ..	10	10
300 fire test .. ..	.. ..	12½@13½	12½@13½

NAPHTHA AND GASOLENE.

		Week ended	
		Nov. 3, 1906.	Nov. 10, 1906.
Naphtha, crude, car. lots, 68 @ 72 deg.	.. ..	15.00	15.00
Gasolene, 86 deg...	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from Nov. 2nd to Nov. 8th were:—Nov. 2nd, 85,853; Nov. 3rd and 4th, 93,241; Nov. 5th, 63,641; Nov. 6th, 89,644; Nov. 7th, 79,546; and Nov. 8th, 115,614. For the month of September, 3,110,306.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—171,084; 180,326; 132,819; 143,236; 72,107; 142,143. For the month of Sept., 4,506,448.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended November 9th and from Jan. 1st, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	281,000	10,505,800	11,192,800
Refined, cases	148,000	11,879,000	18,184,000
Crude, barrels and bulk..	47,000	1,398,600	1,194,900
Crude, cases	—	325,000	199,000
Naphtha, barrels..	7,600	276,500	507,600
Residuum, barrels	—	646,900	670,500
Lubricating, barrels ..	—	218,200	192,300
Total, barrels cde. eq. ..	548,967	21,279,119	24,037,481

CLEARANCES FOR THE WEEK.

During the week ended Nov. 9th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	8,146,450	395,431,214	440,226,191
Crude	—	232,900	931,594
Naphtha	40,400	14,408,734	11,406,773
Residuum	—	4,249,600	3,294,515

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Nov. 9th ..	10,995,933
Total from New York, rom Jan. 1st, 1906 ..	528,201,854
Same period last year	588,499,851
Decrease	60,297,997
From United States, week ended Nov. 9th ..	18,385,040
Total from United States, since Jan. 1, 1906 ..	1,037,491,408
Same period last year	1,117,291,891
Decrease	79,800,483

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The "Review" Shipping List.

NOVEMBER 22, 1905.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE.	Sables d'Olonne	Philadelphia	L. Nov. 11	HOTHAM NEWTON	Batoum	Antwerp and Hamburg	P. Gibralt'ar, Nov. 16
ALCHYMIST	Aberdeen ..	Dundee	Arr. Nov. 16	HOUSATONIC	San Francisco	Bombay	Arr. Nov. 9
AMERICAN	Antwerp	New York ..	P. Scilly, Nov. 13	IMPERIAL	—	—	Tr. on Lakes btn. U.S. and Can.
APPALACHEE	San Francisco	Tientsin	L. Oct. 28	JOANNIS COUTZIS	Piræus	Taganrog ..	P. Dardanelles, Nov. 16
APSCHERON	Barcelona ..	Batoum	L. Nov. 18	J. B. AUG. KESSLER	Philadelphia	—	Arr. Singapore, Nov. 19
ARAL	Tyne	Philadelphia	L. Nov. 18	JAMES BRAND	Pauillac and Barry	Philadelphia	P. Barry Island, Nov. 8
ARAS	Tyne	New York ..	P. Dunnet Head, Nov. 12	KURA	Port Talbot	New York ..	Arr. Nov. 14
ARGYLL	Port Harford	San Francisco	Arr. Oct. 29	LA CAMPINE	Philadelphia	Antwerp	Arr. Nov. 20
ASTRAKHAN	Tyne	Philadelphia	Arr. Nov. 8	LA FLANDRE	New York ..	Ghent	L. New York, Nov. 6
AUGUST KORFF..	Philadelphia	Manchester	L. Nov. 13	LA HESBAYE	Philadelphia	Antwerp	L. Nov. 9
AUREOLE	Tyne	Philadelphia	P. Dunnet Hd., Nov. 14	LA MADELEINE ..	Antwerp....	Genoa	Arr. Oct. 18
AZOV	—	—	Trading on W.C. of South Amca.	LA VIGUESA	Vigo	Philadelphia	L. Oct. 11
BAKU STANDARD	Ibrail	Havre and Rouen	P. Tarifa, Nov. 20	LACKAWANNA	Messina	New York ..	P. Gibraltar, Nov. 15
BALAKANI	Cardiff	Philadelphia	P. Barry Island Nov. 16	LE COQ	Philadelphia	Havre	Arr. Nov. 17
BATOUM	Tyne	Philadelphia	Arr. Nov. 12	LOUTSCH	—	—	Tr. btwn. Odessa & Novorossisk
BAYONNE	New York ..	Hull	Arr. Nov. 19	LUCERNA	Tyne	Philadelphia	P. Dunnet Head, Nov. 14
BEACON LIGHT..	Penarth	Batoum	P. Gibraltar, Nov. 15	LUCIFER	Penarth	Philadelphia	Arr. Nov. 10
BEME	Rangoon....	Bombay	L. Nov. 13	LUCIGEN	Tyne	Batoum	P. Dover, Nov. 16
BLOOMFIELD	Tyn	Philadelphia	Arr. Nov. 4	LUCILINE	Tyne	Philadelphia	Arr. Nov. 9
BORJOM	Alexandria..	Batoum	P. Theodosia, Nov. 13	LUMEN	Kustendje ..	Cette	L. Constant'ple, Nov. 13
BRILLIANT	New York ..	Landsrona..	P. Butt of Lewis, Nov. 13	LUX	Cette	Kustendje ..	L. Nov. 14
BROADMAYNE	Liverpool ..	Port Arthur (Texas)	L. Oct. 28	MAKKAWEI	—	—	Trading in Black Sea
BULLMOUTH	Balekpappan	—	L. Nov. 16	MANHATTAN	New York ..	—	P. Cape Spartel, Nov. 17
BULYSES	Thameshaven	Cardiff	Arr. Nov. 19	MANNHEIM	New York ..	Swinemuude	L. Nov. 14
BURGERMEISTER	Tyne	Philadelphia	P. Dunnet Head, Nov. 20	MARGARETHA ..	Antwerp	Port Arthur (Texas)	L. Nov. 5
PETERSEN	—	—	—	MEXICAN PRINCE	Port Arthur (Texas)	Cette	L. Newport News, Nov. 12
CADAGUA	Kustendje ..	London	Arr. Nov. 20	MIRA	Newport	Batoum	P. Peniche, Nov. 14
CALCUTTA	San Francisco	Shanghai ..	Arr. Oct. 18	MUREX	Tientsin	—	L. Nov. 16
CARDIUM	Balekpappan	—	L. Oct. 31	NARRAGANSETT..	London	New York ..	Arr. Nov. 11
CAUCASIAN	Liverpool ..	Philadelphia	Arr. Nov. 15	NERITE	—	—	Tr. in China Seas
CHARLOIS	Amsterdam	New York ..	Arr. Nov. 17	NEW YORK	New York ..	Southampton	L. Nov. 17
CHESAPEAKE	New York ..	Savona and Messina	L. Nov. 9	OCEAN	Amsterdam	Philadelphia	Arr. Nov. 8
CHESTER	Antwerp	New York ..	Arr. Nov. 13	OILFIELD	Tyne	Philadelphia	L. Nov. 20
CIRCASIAN	—	—	Trading on W.C. of South Amca.	ORANJE PRINCE..	Tyne	New York ..	P. Prawle, Nov. 10
PRINCE	—	—	—	ORIFLAMME	Cette	Philadelphia	L. Nov. 22
CLAM	Balekpappan	Singapore ..	Arr. Nov. 19	OSCEOLA	Wilmington (N.C.)	Liverpool ..	L. Nov. 4
COWRIE	Port Natal ..	—	Arr. Las Palmas, Nov. 14	OTTAWA	Philadelphia	Tampico and Vera Cruz	L. Galveston, Nov. 5
CYMBELINE	Penarth	Philadelphia	Arr. Nov. 16	OURAL	Port Arthur (Texas)	Rouen and Antwerp	Arr. Rouen, Nov. 18
CZAR NICOLAI II.	Batoum	Hamburg ..	P. Gibraltar, Nov. 20	PALEMBANG	—	—	Tr. Sts. Settlements & China Seas
DAGHESTAN	Batoum	Thameshaven	P. Constant'ple, Nov. 16	PAULA	Philadelphia	Danzig	P. Butt of Lewis, Nov. 20
DAKOTAH	San Francisco	Hong Kong..	Arr. Nov. 7	PECTAN	Port Arthur (Texas)	Dover	Arr. Portland, Nov. 21
DELAWARE	Manchester	New York ..	P. Fastnet, Nov. 14	PENNOIL	Tyne	Philadelphia	Arr. Nov. 13
DEUTSCHLAND ..	Tyne	New York ..	L. Nov. 17	PERLAK	Singapore ..	Colombo....	Arr. Oct. 30
DIAMANT	Stettin	New York ..	Arr. Nov. 13	PHOEBUS	New York ..	Hamburg ..	Arr. Nov. 18
ELAX	Samboe	Philadelphia	Arr. Nov. 21	PINNA	London	Philadelphia	P. Scilly, Nov. 19
ELISE MARIE	Gothenburg	New York ..	Arr. Tyne, Nov. 18	POTOMAC	Sunderland	New York ..	P. Dunnet Hd., Nov. 16
ENERGIE	Pillau and Tyne	Philadelph'ia	P. Dunnet Head, Nov. 21	PROMETHEUS	Rotterdam ..	New York ..	Arr. Nov. 15
ERIVAN	Philadelphia	Hamburg ..	Arr. Nov. 18	PRUDENTIA	Pensacola ..	Liverpool and London	L. Nov. 8
EUPLECTELA	Manchester	Philadelphia	P. Peniche, Nov. 12	QUEVILLY	Philadelphia	Rouen	Arr. Nov. 19
EXCELSIOR	Novorossisk	Nordenham	Arr. Malta, Nov. 18	RION	Tyne	Constant'ple	P. Dardanelles, Nov. 16
EZIO	—	—	Coasting Peru	ROCK LIGHT	Kustendje ..	London	Arr. Nov. 19
FRANCE MARIE ..	Philadelphia	Barcelona ..	Arr. Nov. 7	ROSSIJA	Hamburg ..	Tyae	Arr. Nov. 11
GEESTEMUNDE ..	Hamburg ..	Philadelphia	Arr. Nov. 11	ROTTERDAM	New York ..	Antwerp	Arr. Nov. 7
GENESSE	Tyne	Philadelphia	P. Dunnet Hd., Nov. 14	RUSSIAN PRINCE	Liverpool ..	Batoum	P. Sagres, Nov. 10
GEORGIAN	Kustendje	Hamburg ..	Arr. Nov. 18	SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas
PRINCE	—	—	—	SEXOLEINE	Blyth	Philadelphia	Arr. Nov. 18
GOLDMOUTH	Cardiff	Aroe Bay	P. Tarifa, Nov. 18				
GUT HEIL	Hamburg ..	Philadelphia	Arr. Nov. 18				
HAINAUT	Smyrna	Antwerp	L. Nov. 7				
HARRY	London	Swansea	P. Southend, Nov. 22				
WADSWORTH	—	—	—				
HELIOS	Philadelphia	Flushing....	P. Beachy Head, Nov. 18				

Vessel.	From.	For.	Latest Date and Position.
SEMINOLE.....	San Francisco	Calcutta	Arr. Nov. 14
SILVERLIP	Cardiff	Port Arthur	P. Lundy,
		(Texas)	Nov. 3
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Philadelphia	Cette	At Gibraltar,
			Nov. 21
SOPHIE	Messina	Kustendje ..	P. Constant'ple,
			Nov. 15
SPONDILUS	Singapore ..	Balekappan	Arr. Nov. 19
STANDARD	Philadelphia	Stockholm ..	P. Dnnnet Head,
			Nov. 17
STROMBUS	Singapore ..	—	L. Oct. 24
SURAM	Belfast.....	Newport	L. Nov. 20
SUWANEE	Kustendje ..	London	L. Algiers,
			Nov. 17
SVIET	Odessa	Batoum	Arr. Nov. 5
TELENA	Thameshaven	Barrow	Arr. Nov. 18
TEREK.....	New York ..	Savona	P. Gibraltar,
			Nov. 20
TIFLIS	Antwerp	Batoum	P. Tariffa,
			Nov. 13
TIOGA	New Orleans	Philadelphia	L. Port Eads,
			Nov. 7
TONAWANDA	San Francisco	Canton	L. Oct. 20
TROCAS	—	—	At Singapore,
			Nov. 8
TURBO	Cardiff	Philadelphia	Arr. Nov. 21
TUSCARORA	Yokohama ..	San Francisco	Arr. Nov. 20.
TWINGONE	Rangoon ..	Rangoon....	At Coconada,
			Oct. 23
VEDRA	Manchester	Philadelphia	At New York,
			Nov. 13
VILLE DE DIEPPE	—	—	In Port Havre,
			Nov. 15
VILLE DE DOUAI	Campana ..	Philadelphia	Arr. Nov. 20
VOLUTE	Hankow	—	L. Nov. 15
WEEHAWKEN	Belfast.....	Philadelphia	P. Inishtrahull,
			Nov. 11
WILLKOMMEN ..	Danzig	Philadelphia	Arr. Nov. 13
WINNEBAGO.....	Shanghai ..	San Francisco	Arr. Nov. 17

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

November 23rd, 1906.

Refined petroleum is unaltered as follows:—

Russian and Roumanian, 5 $\frac{7}{8}$ d.; American 6 $\frac{1}{4}$ d.;
Water White, 7 $\frac{1}{4}$ d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £7 to £9 10s.
American dark cylinder, from £7 2s. 6d.
American filtered cylinder, from £11.
No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine has been fluctuating but slightly during the week, and once it reached 50s.; it is now quoted for Spot and December, 49s. 6d., and for the first four months of next year 50s. 6d.

LIVERPOOL OIL MARKET.

November 22nd.

Refined oils are quiet, and sellers now quote 5 $\frac{7}{8}$ d. for Russian, Galician or Roumanian; and 6 $\frac{3}{8}$ d. to 7 $\frac{7}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, November 22nd.

Refined, in cases, is lower at 10.00; Standard White, 7.50; Credit balances, 1.58c.

PHILADELPHIA, November 22nd.

Standard White is still quoted at 7.45.

RUSSIA.

BAKU, November 19th.

The Baku oil market is very firm. Light crude oil, spot, 22 $\frac{3}{4}$ -23 copecs per pood, future delivery 21 copecs; residuals, spot 22 $\frac{1}{2}$ copecs; in ships, 24 copecs.

BELGIUM.

ANTWERP, November 16th.

The petroleum market is unchanged. Price of Standard White, spot, 19 $\frac{1}{2}$ francs per 100 kilos.; and two last months of the year 20 francs.

FRANCE.

PARIS, November 16th.

Illuminating oil is quoted in bulk, in whole tank waggons, 20.50 francs per hectolitre; spirit, 25.25 francs per hectolitre. Special white oil, 28.50 francs per hectolitre.

GERMANY.

HAMBURG, November 15th.

The kerosene market is firm. The price of American Standard White is 6.80 marks per 50 kilos, Russian, 6.55 marks.

ROUMANIA.

November 17th.

Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs. ... 4.30-4.40

Refined oil, exclusive of taxes ... 13.00- —

Motor benzine, including taxes ... 16.00-18.00

Benzine, doubly refined ... 24.00-25.00

Residuals in tank waggons, at refinery ... 3.20-3.30

Paraffin ... 120.00-125.00

Lubricating Oils—

Agricultural... 30-32

Prime ... 35-37

Extra ... 40-42

Royal ... 45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kil

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs. 8.50- —

Benzine, sp. gr. 0.710-0.715 ... 15.50-16.50

„ sp. gr. 0.720-0.725 ... 14.50-15.50

„ sp. gr. 0.730-0.740 ... 11.50-12.50

„ sp. gr. 0.745-0.755 ... 7.50- 8.50

INDIA.

BOMBAY, November 5th.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. Rs. 6 0 2

„ Chester, 125 deg. 4 8 2

„ Monkey Brand, 125 deg. 4 2 2

„ Bulk, 125 deg. (in local made tins) .. 3 10 0

„ 125 deg. (8 Imperial gallons) .. 3 0 0

„ "White Camelia" brand, 125 deg. .. No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair 3 2 0

Borneo oils, in tins, per pair 3 2 0

Sumatra "Rising Sun," bulk, per unit .. 3 0 0

„ tins, per pair 3 10 0

Silverlight cases, per case 4 8 0

Russian, "Anchor," cases 4 14 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

Specially prepared for .
this Journal by . . .
the Custom House. . .

FOR THE WEEK ENDED NOVEMBER 12TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALS.	PORT WHENCE.
Nov.	LONDON—			
6	E. J. Wilkinshaw ..	Lub.	10,000	Philadel.
6	Fielder, Hickman and Co. . .	"	5,800	New York
6	Anglo-American Oil Co. . .	"	48,600	"
7	Mordaunt Bros. . .	"	5,000	"
7	" ..	"	4,200	Fiume
7	Anglo-American Oil Co. . .	"	82,000	Philadel.
7	United Shipping Co. . .	Crude	3,000	S. Petersburg
7	London and India Dock Co. .	Lub.	520	Hamburg
8	G. W. Sheldon and Co. . .	Lub. Gr.	350	Antwerp
8	Union Lighterage Co. . .	Lub.	2,250	Philadel.
8	H. Funck and Co. . .	Resid.	683,080	Kustendje
	(Harry Wadsworth)			
9	Asiatic Petroleum Co. . .	Benzine	984,100	Pulo Samboe
	(Telena)			
9	Shell Transport Co. . .	Fuel	1,692,000	Balek Pappan
	(Bulysses)			
9	H. Finkler and Co. . .	Lub.	5,840	Fiume
9	W. Balchin ..	"	10,400	Hamburg
9	C. Price and Co. . .	Lamp	80	"
9	W. Balchin ..	Lub.	10,400	"
10	London & India Docks Co. . .	"	320	"
12	T. H. Lee ..	"	330	"
12	Schenker and Co. . .	"	2,740	Antwerp
12	G. W. Sheldon and Co. . .	"	670	New York
	LIVERPOOL—			
8	A. Hopps and Sons ..	"	2,060	Philadel.
8	Crew, Levick and Co. . .	"	30,990	"
8	Meade-King, Robinson & Co. .	"	32,800	"
9	Worthington and Boler ..	"	5,800	"
9	" ..	M. Colza	1,000	"
9	American Line ..	Lub.	5,400	"
10	W. B. Dick and Co. . .	"	13,680	"
10	" ..	"	21,160	New York
10	" ..	Lamp	3,830	"
10	A. Hopps and Sons ..	M. Colza	5,400	Baltimore
10	" ..	Lub.	10,370	"
12	Valvoline Oil Co. . .	"	600	New York
12	Ismay, Imrie and Co. . .	"	142,120	"
12	Geo. B. Taylor ..	"	21,160	New York
12	Meade-King, Robinson & Co. .	Resid.	1,800	"
12	Davies, Turner and Co. . .	Lub.	170	Boston
12	J. T. Fletcher and Co. . .	Lub. Gr.	1,220	Antwerp
	BRISTOL—			
6	First Anglo-Russian Oil Co. .	Lub.	530	Hamburg
8	Pickfords ..	"	250	"
	GRIMSBY—			
6	J. Sutcliffe and Son ..	"	460	Antwerp
8	" ..	"	240	Hamburg
	HULL—			
6	Wilsons and N.E. Railway Shipping Co. . .	"	50,560	New York
6	" ..	"	1,000	S. Petersburg
6	" ..	"	160	"
DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Nov.	2 Wilsons and N.E. Railway Shipping Co. . .	Lub.	760	Hamburg
8	" ..	"	600	"
8	" ..	"	10,640	"
8	" ..	"	3,560	Husum
8	" ..	"	1,680	New York
9	" ..	"	800	S. Petersburg
9	T. Meredith Roberts and Co. .	"	260	Antwerp
9	Hull & Netherlands S.S. Co. .	Tar oil	3,600	Rotterdam
10	W. Gilyott and Co. . .	Lub.	102,560	New York
	MANCHESTER—			
6	General Pet. Co. . .	Kerosene	494,200	Philadel.
	(Euplectela)			
6	D. Currie and Co. . .	Lub.	160	Hamburg
6	G. Fairclough ..	"	730	New York
6	Meade-King, Robinson & Co. .	"	2,000	New York
6	Bramwell, Fern and Co. . .	"	1,250	"
6	W. Hodgson and Co. . .	"	1,090	"
8	Anglo-American Oil Co. . .	Lamp	880,350	"
	(Delaware)			
	NEWCASTLE—			
6	Tyne-Tees Steamship Co. . .	Lub.	640	Antwerp
10	" ..	"	4,200	"
10	W. Swanston and Sons ..	"	440	Amsterdam
10	P. H. Matthiessen and Co. . .	"	210	Bergen
	PLYMOUTH—			
9	Gas Co. (Balakani) ..	Gas	400,000	Philadel.
	NORTH SHIELDS—			
8	Anglo-American Oil Co. . .	Lamp	430,500	New York
	(Potomac)			
	DUNDEE—			
6	D. Alexander and Sons ..	Lub.	800	Hamburg
	GLASGOW—			
6	Anchor Line ..	"	57,730	New York
6	" ..	M. Colza	4,000	"
	GRANGEMOUTH—			
8	J. Currie and Co. . .	Lub.	6,450	Hamburg
	LEITH—			
6	G. Gibson and Co. . .	"	4,040	Antwerp
6	J. Currie and Co. . .	"	5,300	Hamburg
10	" ..	"	2,520	"
10	W. Graham-Yooll and Co. . .	Lamp	4,360	"
10	" ..	"	4,360	"
	BELFAST—			
7	Anglo-American Oil Co. . .	"	582,940	Philadel.
	(Weehawken)			
	DUBLIN—			
6	Claridge (Balakani) ..	Gas	375,000	"
Total for Week ..			7,292,170	

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== QUALITY TELLS. ==

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FOR THE WEEK ENDING NOVEMBER 17TH 1906—

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Nov.	LONDON—			
13	R. T. Downing ..	Lub.	220	New York
13	A. Brown and Co. ..	"	7,200	Philadel.
13	Ragosine and Co. ..	"	6,220	S. Persersburg
13	Sieve King, Pridmore and Wright ..	Tar Oil	3,140	Stockholm
14	G. H. Haller ..	"	5,100	Archangel
14	Scott's Wharf ..	Lub.	2,000	New York
14	Schlieman's Oil Co. ..	"	3,000	Philadel.
14	Mordaunt Bros. ..	"	16,800	New York
15	Asiatic Petroleum Co. (Telena) ..	Benzine	821,300	Pulo Samboe
15	J. Goodall ..	Lub.	2,100	Antwerp
16	G. W. Sheldon and Co. ..	Lub.Gr.	240	"
16	Worthington and Boler ..	Lub.	5,800	Philadel.
16	Anglo-American Oil Co. ..	"	7,000	New York
16	G. and H. Green ..	"	3,330	"
16	General Petroleum Co. (Rock Light) ..	Gas	1,007,000	Kustendje
17	H. Hill and Son ..	Lub.	10,000	Trieste
17	London and India Docks Co. ..	"	2,600	Hamburg
17	Anglo-American Oil Co. (Hermione) ..	Gas	1,667,510	Philadel.
17	" ..	Lamp	21,100	"
19	G. Jennings ..	Lub.	7,140	"
19	E. J. Walkinshaw ..	"	3,000	"
19	" ..	"	4,000	"
19	J. Spurling ..	Lub.Gr.	280	New York
19	London and India Dock Co. ..	Lub.	200	Boston
19	G. W. Sheldon and Co. ..	"	120	Antwerp
	LIVERPOOL—			
13	Meade-King, Robinson & Co. ..	"	11,200	Hamburg
13	" ..	"	12,000	New York
15	W. B. Dick and Co. ..	"	2,120	Philadel.
16	Bowring Petroleum Co. ..	"	340	"
16	Crew, Levick and Co. ..	M. Colza	4,120	"
16	" ..	"	8,180	"
16	" ..	Lub.	8,270	"
16	Meade-King, Robinson & Co. ..	"	46,580	"
16	" ..	"	7,200	Baltimore
16	A. Hopps and Son ..	M. Colza	2,740	"
16	J. W. Fisher and Co. ..	Lub.	2,000	New York
16	Pickford's, Ltd. ..	"	2,360	Hamburg
17	George B. Taylor ..	"	65,520	New York
19	J. W. Fisher and Co. ..	"	800	"
19	Meade-King, Robinson & Co. ..	"	8,000	"
19	Ismay, Imrie and Co. ..	"	95,500	"
19	" ..	M. Colza	9,000	"
19	Gracie, Beazley and Co. ..	Lub.Gr.	500	"
19	W. Gibson and Son ..	Lamp	2,050	Boston
	BRISTOL—			
13	H. R. James and Sons ..	Lub.	1,840	"
13	H. Pritchard and Co. ..	"	2,100	"
13	W. Smith and Co. ..	"	39,640	"
15	Pickford's, Ltd. ..	"	2,380	Hamburg
17	F. F. Fox and Co. ..	Spirit	189,390	New York

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Nov.	GOOLE—			
17	Goole Steam Shipping Co. ..	Lub.	160	Hamburg
	HARTLEPOOL—			
15	Hartlepool Steam Nav. Co. ..	"	160	Hamburg
	HULL—			
13	Hull and Neths. S.S. Co. ..	Tar Oil	3,840	Rotterdam
13	Wisons and N.E. Railway Shipping Co. ..	Lub.	240	Hamburg
13	" ..	"	80	Antwerp
13	" ..	"	2,680	"
13	" ..	"	4,160	"
15	" ..	"	1,720	Hamburg
15	" ..	"	1,800	Antwerp
16	" ..	"	240	Riga
16	" ..	"	360	Hamburg
16	" ..	"	240	"
17	" ..	"	4,000	New York
17	W. Gilyott and Co. ..	"	54,000	"
	MANCHESTER—			
13	W. Hodgson and Co. ..	"	1,060	Hamburg
13	Geo. B. Taylor ..	"	4,800	New York
15	J. T. Fletcher and Co. ..	"	200	Antwerp
	NEWCASTLE—			
14	Tyne-Tees Steamship Co. ..	"	280	Hamburg
	SUNDERLAND—			
13	Anglo-American Oil Co. (Potomac) ..	Lamp	812,150	New York
	DUNDEE—			
15	D. Alexander and Sons ..	"	200	Hamburg
	GLASGOW—			
13	Anchor Line ..	Lub.	66,800	New York
13	J. and A. Allan ..	"	54,200	Philadel.
13	" ..	M. Colza	8,000	"
13	Clyde Shipping Co. ..	Lub.	250	Antwerp
	GRANGEMOUTH—			
13	J. Currie and Co. ..	"	3,200	Hamburg
14	W. Graham-Yooll and Co. ..	Lamp	1,200	"
15	J. Currie and Co. ..	Lub.	410	"
	LEITH—			
13	W. Graham-Yooll and Co. ..	Lamp	2,180	"
15	" ..	"	2,180	"
16	G. Gibson and Co. ..	Lub.	240	Antwerp
	BELFAST—			
15	T. Dixon and Sons ..	"	200	Baltimore
16	G. Heyn and Sons ..	"	3,120	Riga
	Total for the Week ..		5,165,820	
	Total for the past Fortnight ..		12,457,190	

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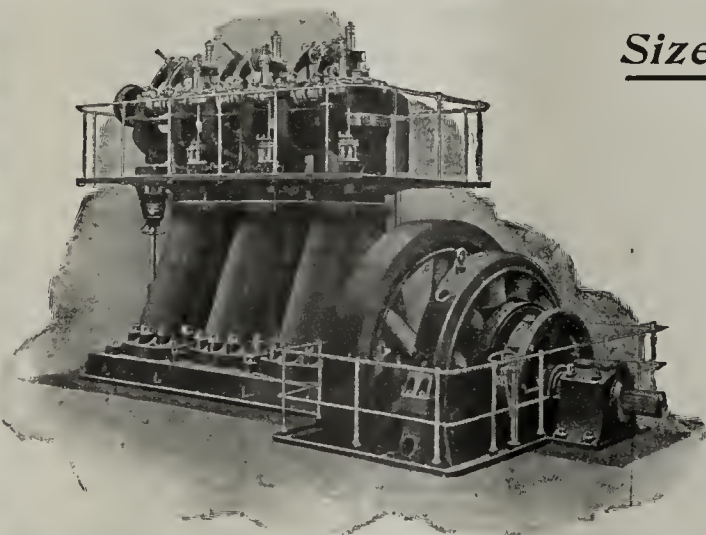
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

DECEMBER 8TH, 1906.

No. 387.

Editorial Notes.

Russia's Petroleum Export Trade.

The important question of the kerosene export trade of Russia formed, and rightly so, one of the most interesting matters which were brought before the recent conference at St. Petersburg, and though for the present the matter of a revision of the tariff for export petroleum over the Transcaucasian Railway remains in abeyance, the President of the Conference made it clear that some concessions will be made in the direction of a lower railway rate to Batoum. This in itself is satisfactory since the illogical policy of the Government in the past has done much to kill Russian kerosene on the foreign markets. The various petroleum producers who spoke at the debate upon this matter did not mince matters, but made a good fight in the best interests of the industry, and though the President could not see eye to eye with them—nor did anyone expect that he would—it was evident that the arguments used by the producers had made their mark. We have reason to believe that a definite announcement will shortly be made as to the decision of the Government in this respect, inasmuch as a conference of a Government nature is at present sitting to formulate schemes to give effect to the decisions of the recent St. Petersburg Conference.

The California Oilfields, Ltd.

The speech which the chairman of the California Oilfields, Ltd., made to the shareholders of that concern during the early part of this week at the extraordinary meeting called to sanction an increase in the company's capital, contained many things calculated to bring pleasure to the hearts of the fortunate shareholders. We hear so much nowadays of the unsatisfactory nature of petroleum investments, that it is refreshing to come across a company which by reason of its good management and its valuable assets in the shape of producing territory, is in a position second to none in point of the success which it has achieved. Since it was formed, dividends have been paid, as Mr. Robert Balfour explained to the shareholders, to the extent of one-half the capital, and to-day its future is so full of good things that it has been decided to increase the company's capital in order that it may place itself in an even better position by the acquisition of a larger territory for production. Looking at the company's operations from every point of view, we have no hesitation in expressing our appreciation of the very valuable work which must necessarily have been discharged by Mr. Balfour and his colleagues in order to bring about that success which has been the company's good fortune during the few years of its existence.

The Roumanian Refining Industry.

The figures relative to the output of various petroleum products from the Roumanian refineries during the first nine months of this year which we give elsewhere are ample testimony of the rapid strides which the Roumanian petroleum industry is making. In its crude oil production, the country is year by year making much headway, while the same may also be said of the refining branch, for though 85 per cent. of the crude oil production was treated at the refineries last year, the percentage for the present year is almost ninety. Thus then, Roumania is bent upon making the most of her mineral oil wealth, and whether we take the output of benzine, illuminating oil or lubricants, some very substantial gains are shewn, these brought down to percentages as compared with the corresponding period of last year, representing respectively 50 per cent., 53 per cent. and 235 per cent. It is mainly as shewing the continuous advance in the direction of expansion that the statistics published on another page will be found of more than ordinary interest.

Bribes in Business.

Lord Russell of Killowen is dead; yet being dead he still speaketh. During his judicial career he was strongly impressed by the evils of illicit commissions, and he embodied his views in a short bill, the legitimate successor to this being the Prevention of Corruption Act, which comes into operation next New Year's day. The several clauses of this measure will go far to making it absolutely certain that many business men in our own city will turn over a new leaf. It is to be regretted that these corrupt principles, which are so repugnant to all honest people, have unfortunately been found to permeate almost all classes of business, and one must hail with great satisfaction the coming into force of the new Act which has been pushed forward with such energy by the London Chamber of Commerce. We have recently received a circular from the Secret Commissions and Bribery Prevention League in which the salient points of the new law are set forth, and we have reason to believe that this organisation, formed by-the-bye to take every legitimate means in its power to combat the evil of secret commissions and bribery, will soon succeed in making its voice felt on behalf of maintaining pure and unsullied the commerce of the United Kingdom.

America's October Petroleum Exports.

As will be gathered from the statistical tables found upon another page of this issue, there was a heavy gain in the exports of America's petroleum products during October—a most gratifying fact, when one recollects the unsatisfactory state of her foreign oil trade for the past few months. The attempts in America to cripple the country's export oil trade have unfortunately done much to discredit

American oil abroad, and the decreasing exports registered for September were the natural result of the decidedly unwise agitation which has of late spread throughout America. Prices we know are not all that could be desired, but we venture to suggest that the American refiners would heartily welcome a considerably increased volume of trade with foreign countries even at the present figures. Taking the ten months of America's oil trade this year, we see that when compared with the figures for the corresponding periods of 1905, she is a little behind, both as regards the value and the amount of exported oil. This is not a step in the right direction, and the regret is that the American petroleum industry as a whole still forms the target for the sport of President Roosevelt and his followers.

LONDON OIL SHARE MARKET.

FRIDAY, DECEMBER 7TH.

Although business has been on a small scale in connection with the Oil Group on the London Stock Exchange during the past fortnight, buying has predominated considerably over selling and taken generally the market stands in a much healthier position with prices slightly higher in the majority of cases.

For the convenience of our readers we quote in full values ruling on Saturday, November 25th:—Anglo-Russians being 0- $\frac{1}{8}$, Assam Oil $\frac{9}{16}$ - $\frac{11}{16}$, Baku Ordinary 3s. 9d. to 4s. 3d., Preference 6s. to 7s., Bibi-Eybats $\frac{5}{16}$ - $\frac{7}{16}$, Debentures 84-89, Californian Oilfields 4 $\frac{3}{4}$ -5 $\frac{1}{4}$, Refineries 1 to 1 $\frac{1}{4}$, European Preference $\frac{1}{16}$ - $\frac{5}{16}$, Debentures 79-84, Russian Ordinary 11s. 3d. to 12s. 3d., Preference 11s. to 11s. 6d., Debentures 91-94, Schibaieff Ordinary 7s. to 8s., Preference 2 $\frac{1}{4}$ -2 $\frac{3}{4}$, Shell Transport Ordinary 29s. 6d. to 30s. 6d., Preference 9-9 $\frac{1}{2}$, and Spies $\frac{7}{16}$ - $\frac{1}{2}$.

On Monday the only alteration was a rise of one point in Russian Debentures at 92 to 95, which was followed on Tuesday by a further advance to 93 to 95. Californian Oilfields on that day being also in request, improving $\frac{1}{4}$ to 5-5 $\frac{1}{2}$, and Spies gaining $\frac{1}{16}$ at $\frac{1}{2}$ - $\frac{9}{16}$.

Wednesday was quiet and unproductive, but a little weakness set in on Thursday which resulted in a fall on balance of 9d. per share in Baku Ordinary at 3s. to 3s. 6d., and 3d. in Russian Ordinary at 11s. to 12s. Since then no changes were registered until Wednesday when Californian Oilfields again moved up, closing very firm 5 $\frac{1}{4}$ -5 $\frac{3}{4}$, and on Thursday when Assam Oil rose $\frac{1}{16}$ to $\frac{5}{8}$ - $\frac{3}{4}$, and Bibi-Eybats improved to $\frac{3}{8}$ - $\frac{1}{2}$, shewing $\frac{1}{16}$ advance on balance. The End November account commenced on November 27th, when charges for interest were again stiff, the Bank rate remaining at 6 per cent. Oil shares were generally carried over at 7 per cent. to 9 per cent. to 8 per cent. to 10 per cent. and comparisons of making up prices shewed a list of shrinkages in value from prices fixed at the Mid-Month settlement. Baku Ordinary at $\frac{3}{16}$ fell 3d. per share, Preference at 5s. 6d. were 1s. 6d. lower, Californian Oilfields declined $\frac{3}{8}$ at 5 $\frac{1}{4}$, Russian Ordinary 6d. at 11s., Schibaieff Ordinary ditto at 7s. On the other hand, Spies rose 1s. 6d. at 10s. 6d., and Shell Transports gained 3d. at 1 $\frac{1}{2}$. Anglo-Russians at 1s., Russian Preference at $\frac{9}{16}$, and Schibaieff Preference at 2 $\frac{1}{2}$ being unchanged.

THE "REVIEW" SUMMARY.

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News in a Nutshell.

OUR financial writer on the Stock Exchange states that there have been few sales of petroleum shares since our last issue, for there is now a healthier tendency noticeable.

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A MOTOR barge driven by a petroleum engine, and constructed by Mr. Norman Trailby, of Birmingham, is attracting the attention of many canal engineers, several of whom have obtained permission to give it further trials, in various parts of the country. The barge is 72 feet long, and is capable of carrying between 30 and 40 tons.

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"CAN'T we get some oil or candles," said Mr. Justice Ridley at a country assizes last week. "It seems strange," he continued, "that we should have lights here which we would not tolerate in our own homes." The offending lights were a number of incandescent gas jets.

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THE Crown Prince and Princess of Roumania have expressed their warm approval of the scheme for the holding of a Balkan exhibition at Earl's Court, London, in the spring and summer of 1908.

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FROM statistics recently issued, it is interesting to note that the total number of motor cars which paid the tax last year in France was 21,523.

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DR. PAUL DVORKOVITZ is again to appear before the Fuels Committee of the Motor Union next week in order to continue his evidence as to motor fuels.

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OUR readers will be interested in learning that in order to perpetuate the memory of the late Mr. William Cameron, his many friends have set a movement on foot to endow or support a bed to be called the "William Cameron bed" at either the West Ham hospital or any other hospital in the district in which he lived. The chairman of the memorial fund is Captain J. R. Coundron of 38, Bathurst Road, Ilford; the treasurer, Mr. Mark Abraham, 18, Adamson Road, N.W., and the hon secretary, Mr. A. W. Rolfe, 8, Creechurch Lane, E.C.

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THE "Sunlight" is the name of a new bulk oil-carrying vessel, launched a few days ago for Messrs. Lever Bros., Ltd., of Port Sunlight. The vessel has a capacity of over 2,000 tons.

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A STRIKE of workmen employed at a number of the oil producing properties at Babe Aibat occurred last Monday and still continues. Among the companies who are suffering are the Caspian Society, Messrs. Pitoieff & Co., and the Balakhany Co. Information is very meagre, but we learn that no English Companies are implicated. The strikers claim more wages and better housing conditions.

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THE production of crude oil at the Baku oil fields during October exceeded 43,000,000 poods, but for the first half of November the total yield was only about 19,000,000 poods.

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WE understand that representatives of Messrs. Nobel, the Rothschilds, and the Deutsche Bank, are at present in London definitely settling the transfer of the Consolidated and the General Petroleum Companies to the new amalgamation of interests registered under the title of the British Petroleum Co. with a capital of £500,000. It will be recollected that the two first-mentioned firms are interested in the Consolidated Petroleum Co., while the arrangement by which the Deutsche Bank became interested in the General Petroleum Co., will be still fresh in the minds of our readers.

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IN view of the great importance acquired by London as a great centre, in which converge large petroleum interests, our well-known Russian contemporary—the *Neftianoie Dielo*—has recently established a branch office in the city. London presenting greater facilities than Baku for information concerning oil trade outside Russia, the *Neftianoie Dielo*, which is the official organ of the Petroleum Producer's Association of Baku, has transferred to this new branch the editing of its foreign section. The London office is located at 3 and 4, Lime Street Square, where subscriptions and advertisements can be received.

The Liquid Fuel Conference at St. Petersburg.

IMPORTANT DISCUSSIONS.

CONCLUDING SITTINGS.

In addition to the subjects already published, the conference on November 8th discussed the question of petroleum storage facilities. The producers shewed themselves extremely hostile to the idea of public storage places, and did not wish even to listen to it. Only after repeated invitations by the President, Mr. E. L. Nobel declared that the petroleum industry did not want any fresh storage facilities. The existing storage facilities, of an aggregate capacity of 700,000,000 poods, partly in Baku and partly on the Volga and in the interior, were amply sufficient for all needs.

Mr. Kerbedz, representing the Vladicaucasian Railway, strongly deprecated all attempts by the Government to interfere with free competition by regulating the supply and demand.

Of all the representatives of the petroleum producers only Mr. M. I. Lazareff declared himself in favour of Government storage installations, but only for Bebe-Aibat.

After some further discussion, the President announced that in view of the want of sympathy toward the proposal on the part of the petroleum producers, he would not refer the question to the forthcoming conference of petroleum producers at Baku, but would endeavour to clear it up by other means at his disposal.

At the tenth meeting on the 9th November the conference dealt with the question of the export of kerosene. The representatives of the petroleum industry in their speeches spoke of the great decline in this important branch of the Russian export trade, and complained of the utter indifference shewn by the Government to the fate of the kerosene export trade, declaring that all the efforts made by the petroleum producers in the past to secure the foreign markets were almost irretrievably lost.

Mr. E. L. Nobel set out at length the importance of the kerosene export trade to the economic life of the country. Such an important item in Russia's trade balance as the foreign trade in kerosene could only be established on a firm basis on the condition of the normal working of the oil fields. The interruption during the winter of deliveries to the interior was made use of to extend the operations of the kerosene refineries. Their work must proceed without interruption all the year round, according to plans previously arranged in all details. Only then would the manufacture and sale of that article of first necessity proceed regularly. The petroleum producers had to work very hard to regularise the kerosene trade. They had to fight against American competition, and strain every nerve to keep up the struggle. There were times when for the sake of conquering the world's markets, the petroleum producers not only renounced their profits but even had to pay out of their own pockets on every pood of kerosene exported. Simultaneously they had to bear the attacks of the

Government, who kept altering the tariff quite unexpectedly, and so upset all the commercial calculations of the exporters. Within a short time the tariff had changed 14 times. In the happy time when the rate from Baku to Batoum was lowered to 9 copecks, Russian kerosene poured on to the English market and reached 50 per cent. of the total consumption there, and it seemed as if it had taken a firm position. It was at that time that the petroleum producers, chiefly the firms of Nobel Bros., Caspian Society and Mantascheff and Co., decided to spend enormous amounts of capital—upwards of 25,000,000 roubles—on the establishment abroad of tank installations, offices, warehouses, etc. But those days had gone. The Government had successively raised the rate, first to 12 copecks then to 16 copecks, and lastly to 19 copecks, and in that way they had killed the trade, which was beginning to flourish. By that time the condition of the world's trade had also changed. American kerosene again became abundant. Texas, fortunately situated on the sea coast, having the advantage of cheap sea transport, could supply kerosene to the markets at a comparatively very low price. Galicia, Roumania, Louisiana and the new oil fields in the Dutch Indies also appeared as competitors. Twenty-seven years had gone by since Russian kerosene first came out on the world's markets, and the Russian kerosene industry had to admit itself beaten, and leave the field of battle to its more fortunate rivals.

The President disagreed with this way of putting the question. The petroleum producers exaggerated the influence of the railway rate on the kerosene export trade. It was not the high rate but the general conditions of Russian industry which had restricted the export of kerosene and prevented its resuming its former place on the foreign markets.

Mr. M. V. Tchistiakoff, Assistant Minister of Finance, reminded the conference that the council of the Baku Petroleum Association asked to defer the revision of the export rate on the Transcaucasian Railway.

Thereupon Mr. E. L. Nobel, and after him Messrs. M. I. Lazareff, M. B. Pappé, A. O. Feigl and others, made statements, supported by geographical maps and statistical data, concerning the policy pursued by the Government, who for the last four years refused to lower the excessive rate on the Transcaucasian Railway. The Volga manufacturers and shipowners, they said, were mistaken in their belief that the prohibition of the export of kerosene would lower the price of residuals. On the contrary, an increased output of kerosene and its export would tend to lower the price of fuel oil, and remove part of the burden from the refining industry. There was no reason to fear any shortage of kerosene on the home market. There was plenty of kerosene, enough both for home consumption and for export.

Mr. V. I. Timiriaseff remarked that the Government policy in the matter of the kerosene export rate was not marked by stability. The Government, who by its very nature should possess a fiscal soul, entered upon the very perilous road of a sliding tariff scale with the intention of making the changes in the rate follow up the rather sharp fluctuations in price on the London market. They were unable to co-ordinate their measures with the moments of those fluctuations, and, instead of helping, only harmed the Russian kerosene export. In order to atone for past transgressions, it was necessary to declare openly the principles by which the Government would be guided in the future, and to make the normal rate between Baku and Batoum not 19 copecs, but much less than that.

The complaints of the petroleum producers against the actions of the Government induced the representative of the Comptroller of State, I. B. Jarnovsky, to address the assembly. He declared that he was not an opponent of the export of kerosene, and proceeded to shew to the petroleum producers, by comparing the railway rates with the statistical data, *vs* the export of kerosene and prices in London and Baku, that the railway rate was not the principal cause of the decline of exports. In 1900, when the rate was 12 copecs, the export of kerosene amounted to 72,000,000 poods; in 1901, the rate was increased to 16 copecs, and the export increased to 81,500,000 poods. In the following two years the exports were 78,000,000 and 90,500,000 poods respectively. In 1904, when the rate was 19 copecs, the export fell but only to 84,500,000 poods; on the other hand, in 1905, when the internal condition of Russia became disturbed, the export of kerosene fell to 39,000,000 poods. The price of kerosene in London in 1903 ranged from 70 copecs to 1 rouble 23½ copecs, whilst the cost to the exporters (for London) was 78 to 95 copecs. This year the price of kerosene in London had fluctuated practically within the same limits, whilst the cost of the kerosene to the exporters had gone up to 1 rouble 16 copecs to 1 rouble 20 copecs. It was evident that the rise in the railway rate from 16 to 19 copecs had less influence on exports than the great advance in the cost of crude at Baku.

Some further discussion followed, the petroleum producers making further statements in support of their demand for a reduction of the rate. The President, in summing up the debate, said that nobody seriously raised the question of prohibiting the export of kerosene, and the conference unanimously agreed that the kerosene export was necessary both for the producers and consumers. The lowering of the tariff alone would not help the export trade. It fell through many causes, chiefly owing to the general disturbed condition of the country. The Government could not create conditions under which Russian kerosene could compete successfully with American on the foreign markets. All the Government could do was to revise the railway rate, and that it would do. The kerosene export rate would be considered by the tariff committee in due course, when due regard would be paid both to the desires of the petroleum producers and the interests of the treasury.

A number of reports and proposals submitted to the conference during the preceding days were then considered, but the questions touched upon by these proved to have been adequately dealt with at previous meetings.

One of the members of the conference raised the question of lowering the excise duty on kerosene with a view to furthering the development of the home consumption of that product. The President replied that at the present time it was hardly possible to cut down one of the surest sources of revenue, when, without the Duma, it was impossible to make good the loss on the budget by some other impost. As to transferring the duty from kerosene to crude oil, it had now been ascertained that that would be attended with great technical difficulties, and would hardly prove more advantageous to the consumers.

The President, in his closing speech, expressed himself satisfied with the result of the conference. Their task was not easy. In the discussions came up the conflicting interests of the petroleum producers, the consumers, the representatives of the coal industry, and the representatives of labour. They had nevertheless been successful in throwing light on the various questions from every point of view, and arrived at impartial conclusions. A number of the questions, the decision on which rested with the Government, would receive a practical solution in the near future. There were other question which had to be settled by the parties interested among themselves. He hoped that by the joint efforts of all those who had taken part in the conference, all the difficulties would be satisfactorily overcome, to the great benefit of the industrial life of Russia.

The conference then closed, after having held ten protracted sittings.

LOSSES TO THE AMERICAN PETROLEUM INDUSTRY.

DEATH REMOVES TWO PIONEERS.

During the past few weeks America has lost two well-known pioneers in connection with its petroleum industry. The first case is the decease of Mr. Oliver Platt Swisher, a gentleman who for upwards of 40 years has been connected with the progress and development of the industry. Mr. Swisher's career commenced shortly before the close of the Civil war, but the last quarter of a century of his life was probably the period that brought him in closest touch with the leaders of the American petroleum industry, for throughout that time he was directly associated with the National Transit Co., which concern must feel his loss acutely.

Another gentleman who has also passed away is Mr. John O'Brien, the late general superintendent of the Buckeye pipe lines. Mr. O'Brien belonged to the younger order of men connected with the American petroleum industry, and his sudden and unexpected death has cast a gloom over the entire industry. Mr. O'Brien began his career in the National Transit Co., and eventually became manager of an important division of the pipe line system of the Ohio and Indiana fields.

CALIFORNIA OILFIELDS, LIMITED.

THE COMPANY'S CAPITAL TO BE INCREASED.—SATISFACTORY POSITION AND PROSPECTS.

An extraordinary general meeting of the shareholders of the California Oilfields, Ltd., was held on Monday at Winchester House, London, E.C., Mr. Robert Balfour, M.P., the chairman of the company, presiding. The meeting was called for the purpose of submitting the following resolution; "That the capital of the company be increased to £500,000 by the creation of 200,000 additional shares of £1 each, ranking for dividend and in all other respects *pari passu* with the existing ordinary shares of the company."

The SECRETARY (Mr. F. W. BISHOP, F.C.I.S.) having read the notice convening the meeting,

The CHAIRMAN addressed the shareholders. In doing so he said: We have met together to-day in pursuance of the notice which has just been read, and naturally you would expect some explanation of the reasons which have led the board to recommend that authority be granted to increase the capital as proposed in the resolution. Perhaps it will be useful if, under the circumstances, I refer, especially for the information of shareholders who have been with us for a limited time only, to the history of this company, though I will do so quite briefly. It was organised in 1901, with an authorised capital of £300,000 in shares of £1 each, and 250,000

number of buyers on the Pacific coast, and, indeed, in the United States, for this commodity. Consequently we do not have that general competition for our production which would enable us to set one buyer against another in a commercial sense. We have to depend very much on this limited number of buyers, and the best means we had of bringing them to terms was to simply say, "You must either buy at such and such a price, or we will not continue our deliveries." Others, I may mention, have been adopting the same course, and we have advice in the past few days which shew that the course which our agents have adopted—and which was decided upon during my visit there, having my full approval as chairman of this company—was fully justified. The result has been that they have very recently made quite a large sale—I hope that you will not press for details—at a price which is approximately 50 per cent. higher than the price which they had previously been receiving, and which, indeed, other sellers have very recently accepted. That advance, of course, is a very marked one. Our agents have been looking for it for a considerable period, and I think we may all congratulate them on the result of their efforts, and on the fact that their expectation has proved correct. I would ask you to bear in mind, in this connection, that the advance of 50



A PORTION OF THE COALINGA FIELD WHERE THE COMPANY'S PROPERTIES ARE SITUATED.

of those shares were at that time issued. That was done in order to acquire certain properties, of an area of 4,480 acres, in the Coalinga oil field, in Fresno county, California. The company then proceeded to develop these sections, and those who have been shareholders from the commencement know that that development has proved quite successful. The first dividend was paid in 1904, and we have since distributed dividends in all amounting to 55 per cent. on the capital. Besides that, we have laid aside £30,000 as a reserve fund, and have written off quite a large amount—not too large, we think, but still quite a liberal amount—for depreciation on the cost of the wells, the buildings, and the equipment. That is a usual practice in connection with a property of this kind, and we have certainly aimed at dealing with the question of depreciation from a conservative and safe point of view. These dividends include 10 per cent. interim dividend paid this year. The accounts for the present year, of course, are not in a condition from which we can form an accurate view as to how they will come out; but there is a very good reason to believe that the results of the year's working will be satisfactory.

The production of this company's property for the twelve months ended June 30th, 1903, was 210,000 barrels; for the twelve months to June 30th, 1904, 860,000 barrels; and for the twelve months to June 30th, 1905, 2,100,000 barrels. At this time the termination of the financial year was changed to December 31st, and for the six months ended December 31st, 1905, the production was 1,850,000 barrels, or at the rate of 3,700,000 barrels per annum. During the present year the production has not been maintained. I think it right to mention that, with an explanation. There would have been no difficulty in maintaining, and even increasing, the production; but we have been faced with market conditions which led us to believe that it was desirable to curtail production for a time, in order to bring our buyers to a sense of what the value of our production was. We have, as I daresay you know, a limited

per cent. is not only material in itself, but it is pretty safe to say that the whole of it implies profit; that is to say, it may be that, as we go on developing the field, the cost of wells may increase somewhat as we go to greater depths; but speaking broadly, the additional price means so much added profit to this company; so that I feel, and I think you will feel also, that the policy of closing down for a time, and reducing our production, during the present year, has been fully justified by the results.

I spent two months in California, going out on August 1st and returning quite recently, and during that visit—indeed, for a considerable period—our agents had before them certain negotiations with a view to the acquisition of additional property. I visited Coalinga, also other producing fields in California. I went, of course, to see our own property, and I need hardly say I found its condition absolutely satisfactory in every respect. Great developments had taken place since my visit four years ago, and I feel that the management of Mr. Graham has shewn very good results; though I should say that our agents in San Francisco are also entitled to credit for their supervision. I had occasion to call at the Standard Oil Co.'s office in New York, and met one of the principal representatives there, who told me he had visited the property, and did not know of any field in the United States which shewed better evidence of good management than ours. I went to see the other fields, mainly in order to ascertain, so far as I could—because it is not always easy to get information on such points—what the present and prospective production was there. As you know—at all events, it has been referred to in our reports from time to time—the production of oil in California has greatly increased within a limited period, and the result of that was inevitable, viz., that prices were greatly depressed; that is to say, the supply came more rapidly than the consumption warranted. There was, consequently, less disposition to drill wells in new fields, and

the result has been a very substantial reduction in production. What is more important is that it is, at all events, clear that the balance between consumption and production has very greatly changed, so that the position of producers to-day, as indicated by the advance in price which I have already mentioned, is that they are much better able now to hold their own against any effort to depress prices; and while it does not do to be too hopeful, and hold out expectations of still higher prices, it may be that we shall see a further improvement. Consumption has greatly increased, and stocks—a very important point—have very much diminished. I myself saw reservoirs quite empty which had been built for the purpose of holding surplus stocks. I was told also that tankage and other reservoirs had been drawn upon considerably. When I was there one buyer, who had a contract with us for 4,000 barrels a month, covering six months, came and said: "We would like you to hasten delivery under our contract. We are willing to take it all—at the rate of 4,000 barrels a day," so that it was all delivered promptly, whereas under the contract we were not called upon to deliver except over a period of six months. That simply proves that the parties were anxious to get delivery, and the same parties have since entered into the contract which I have already mentioned.

I will now say a few words with regard to the development of the property. This was originally commenced, as was stated in our first report, on the south-east corner of Section 21 and the north-west corner of Section 27, which two points coincide, corner-wise. Our main efforts were directed to Section 27, which we have known to be a very desirable and productive section, not only in point of quantity, but also in point of the quality of its production. The productiveness of that section has led our field manager (Mr. Graham) to recommend very strongly the acquisition of additional property, already referred to, and our friends fully support his recommendation. This property is situated conveniently for our purposes. It can be handled conveniently from the camp which we have, and our equipment is available to deal with it. There are various reasons why our agents think that the property should be acquired. Prices are, of course, very much higher than they were at one time. These properties could have been acquired much cheaper a few years ago, before they were proved and developed; but they have now been partially tested. Our agents have reason to know—so far as anything that is underground can be known—that the properties are very valuable, and, further, that they produce a quality of oil which there is every reason to believe will prove saleable. We have always found Mr. Graham a very competent and careful adviser; but we have had additional expert advice, all of which will be presented to the shareholders in due course if steps are taken to carry out the purchase. Confirming the views Mr. Graham has expressed—and, indeed, from their own knowledge of the property—our agents, though not pretending to be experts by any means, feel in their own minds tolerably certain from their experience, that the advice they have received from Mr. Graham, and otherwise, is worthy of favourable consideration.

The opportunity to buy the properties arose just before I left California, and I brought away with me certain data which lead me to say a word with regard to certain whispers, perhaps I may call them, of dissatisfaction which have been expressed, that we did not issue, together with the notice calling this meeting, some information as to the purposes we had in view in desiring to have the capital increased as proposed. To that I must myself plead guilty; but perhaps I may offer some excuse. My first visit to the City after my return was on the Monday before the meeting of the board at which the issue of that notice was authorised. We were advised that the opportunity which we have to buy these properties was limited in point of time, and that it was desirable that the necessary authority to procure the funds needed to buy the properties should be taken without any delay. Consequently, it was necessary, as the regular meeting of the board took place so soon, to issue the notice promptly, and this was accordingly done. If we could have delayed matters, we might have decided to issue some information along with the notice; but I need hardly say there has been no desire on the part of any of us to withhold such information as the shareholders, we clearly understand, are entitled to; and I have no doubt you will readily accept any excuses which may be necessary under the circumstances. My fellow-directors naturally expected to receive from me some information for their guidance, and there was no time therefore to go into the matter very fully. This meeting, as you will understand, is a formal meeting in order to authorise this increase of capital. Before the company is committed in any way to a purchase, the directors have to consider very fully, as they will do, all the information which has been submitted already and the further

information which we expect to get before they reach a decision whether there should, in point of fact, be any purchase made. If none is made there will be no issue of shares at the present time. I may say in passing that the board are of opinion that it is desirable, from an entirely different point of view, that they should have authority to issue additional shares when circumstances render it desirable to do so. For instance, certain matters came to my knowledge in California pointing to the desirability of our having a substantial sum of capital which could be drawn upon. I do not think it is at all likely that we will be called upon to utilise the new capital for that purpose; but in the sale of our production we think it well that buyers should know that we are well armed to sell that production ourselves if it becomes necessary to do so. (Hear, hear.) I do not wish to go into any detail on that point, but I mention it from the point of view I have stated—that we ought to be supplied with the means of obtaining capital if, in the view of the board, it is in the interests of the company to use that capital. In saying that, however, I wish to add at the same time that our view has been all along that the interests of this company are probably likely to be best served by our being a producing rather than a refining company. That is the line upon which we have acted from the first, and upon which, all things being considered satisfactory, it is probable we shall continue to act.

In issuing fresh capital the directors will fully consider the interests of the shareholders, to whom the first opportunity to subscribe will doubtless be given. We want, of course, to get as good a price for the shares as possible; it is to the interest of the company that we should do so, and while it might be reasonable to make some fair concession on the market price, you may rely upon it that the directors will pay due regard to the interests of the shareholders in whatever steps they may take in that matter, and that when the issue is made I do not think any shareholder will have any cause to complain as to the lines on which the business is dealt with. Assuming that we carry out the purchase now proposed, in no case is it likely that the issue of shares required will amount to the total unissued shares. Roughly speaking, I should say it would not call for the issue of more than one-half of the unissued shares after the increase of capital has been authorised, that half being 125,000 shares. The question of price will, of course, be governed by circumstances, into which it would be premature to go to-day. I may say that the price at which this property is offered to us is an average of about \$2,250 per acre. It is believed to be productive property throughout. I mention this figure because, when I was there, a small tract of land, some 30 acres in extent, on the south-east corner of Section 22 and right adjoining our camp, was sold for \$10,000 an acre. I know the buyer and seller, and got the information direct from themselves. It is right I should say that that is a property with a good many wells on it, producing a large income; but it shews what a well-developed property is worth. The property we have under consideration is yielding a fair income, though only developed to a small extent, and that income will provide a fair dividend now on the price which is asked for the property. There is plenty of room to sink more wells, and there is no reason to doubt that by the process of development which we have succeeded in carrying on in the sections which we now own, we shall be able to increase largely the income from the new property, if acquired. I now beg to move the resolution of which you have had notice.

Mr. JOHN HALLIDAY, in seconding the resolution said, when the subject was first mentioned to him, he was rather averse to the proposed purchase, but after going thoroughly into the matter, he was inclined to agree that the course recommended by the chairman was a sound and business-like one. He therefore strongly recommended the shareholders to agree to the proposal that the capital be increased, whereupon the question of purchasing the properties referred to would receive the further consideration of the board.

The CHAIRMAN, in answer to shareholders, said that during the past few months there had been evidences that the supply was inadequate to meet the demand, and perhaps he was not quite accurate in saying there was only a limited number of buyers. If they went into the open market and endeavoured to make contracts they might find a great number of buyers who would be ready to make contracts for fuel purposes more particularly; but to do that the company would have to give a guarantee of delivery. The consumer would not make a contract with the company with such safeguards as the board considered it desirable for the company to have, in case of accident happening on the field or various other eventualities which had to be considered. It was therefore better, probably, from their own point of view, to deal with the large buyers to whom they had been accustomed to sell. Production had now reached a point which, relatively to the consumption, placed the producers in such a good position that the board thought there would be no difficulty at all in continuing sales at prices at least as good as those now being obtained.

The resolution was carried unanimously, and the meeting closed.

THE MOTOR UNION AND THE QUESTION OF MOTOR FUELS.

Owing to the increase in the price of petrol, the Motor Union of Great Britain and Ireland some time ago appointed a Fuel Committee in order that a careful and exhaustive inquiry should be made into the causes which have led to the increase in price, whether that increase was likely to continue, and, in the latter event, what steps could be taken to render other fuels available so that motorists would not be absolutely dependent on the petrol supply. The chief points covered by the committee are:—

(1) The quantity and quality of the world's petrol supply.

(2) The conditions which determine its price—*e.g.*, the demand for crude oil for fuel purposes; the price of illuminating oil; the cost of the transport of spirit; the vexatious regulations of local authorities, etc.

(3) The possibilities of other fuels, as petroleum, alcohol and shale spirit.

(4) The alteration necessary to make in the ordinary petrol car in order to enable other fuels to be used, and, in particular, what progress has been made toward securing a suitable carburettor for ordinary paraffin.

Much of the evidence placed before the committee thus far has been of great interest to those associated with the petroleum industry, inasmuch as the two subjects of the use of heavy benzine and ordinary kerosene have been the principal matters discussed. With reference to the former subject, the committee has only partly heard the evidence of Dr. Paul Dvorkovitz, and consequently we cannot do more than mention the matter *en passant*.

Mr. J. H. Knight, a gentleman well known in connection with experiments relating to separate vapourisers, in the course of his evidence before the committee, said he did not think it was necessary to have a carburettor for paraffin. His own principle was that of a separate vapouriser heated and kept hot at the end of the cylinder. If a hot-pot or hot-end were used, the vapourisation would take place and the working of the engine would be very satisfactory. This principle was adopted in the "Petter" type of engine made at Yeovil, in which there was no carburettor. He thought that engines of this type were suitable for motors, but slower piston speeds were necessary than was required for petrol. His firm opinion was that paraffin was only slightly more difficult to manipulate than petrol, but with modern methods it should be possible to employ even on private motor cars, paraffin in every-day use.

He had had experience of the use of paraffin on his own motor car, but that was not a success, one reason being that there was smoke when the governor was cut out, but three years ago, at Aldershot, a heavy oil motor of Milnes-Diamler worked perfectly, starting on petrol. Shortly afterwards the Government offered a prize of £500, which was awarded to Hornsby, but he considered that that engine was a failure owing to the volumes of unburnt paraffin smoke emitted. He thought it was

quite possible to devise a carburettor starting with petrol, but time would have to be taken to heat.

The next witness was Mr. J. F. Bennett, who said that he had been making experiments with the fuel question extending over nine years, and carried out at a cost of about £9,000. He could say with confidence that he had arrived at a method of employing paraffin, so that the results were obtained in no way different from the best type of petrol, except that in using paraffin he got more power from the same engine than by using petrol. The secret or basis of his success was the use of carburetted air in contradistinction to the use of vapourised oil. All his experiments proved conclusively that vapourised oil was uncertain, troublesome and wholly unsatisfactory, except under certain favourable and exceptional conditions, and that, he believed, accounted for the failure of so many paraffin carburettors. His carburettor brought a stream of cold air in contact with a current of finely divided particles of paraffin. Both stream and current were caused by the suction of the engine, and thus a rich carburetted air was produced.

GALICIAN PRODUCTION DURING SEPTEMBER.

The production of crude oil in Galicia during September, 1906, and the stocks of oil at the end of the month were as under (in tons):—

Field.	Production.	Stocks on 30th Sept.
West Galicia—		
Potok	1,110	5,146
Rogi	1,659	6,811
Rowne	128	228
Tarnawa-Wielopole-Zagorz ..	2,040	7,285
Krosno	2,110	12,439
Other West Galician fields ..	2,240	10,221
East Galicia—		
Boryslaw-Tustanowice	48,270	359,867
Schodnica	3,620	22,721
Urycz	1,470	13,971
Mrzdnica	160	496
Other East Galician fields ..	940	580
Total	62,567	440,167

The stocks during the month decreased by over 5,000 tons. The deliveries of crude oil from the fields during October amounted to 68,933 tons, of which there were at Boryslaw-Tustanowice 48,447 tons. The quantity used as fuel at the wells and loss amounted to 2,795 tons, of which 2,000 tons were at Boryslaw-Tustanowice.

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended 24th November was 233,000 poods, or 3,756 tons; and for the week ended 1st December 256,000 poods or 4,175 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended November 25th was 281,000 poods, or 4,530 tons; and for the week ended 2nd December, 285,000 poods, or 4,595 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 25th November was 114,750 poods, or 1,850 tons; and for the week ended 2nd December, 117,360 poods, or 1,892 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 25th November was 147,684 poods, or 2,381 tons; and for the week ended 2nd December was 150,210 poods, or 2,422 tons.

MISCELLANEA.

PETROLEUM IMPORTS INTO GERMANY IN OCTOBER.

The following were the imports of petroleum products into Germany during October, as compared with September, (in tons):—

	October.	September
Illuminating oil	82,820	71,496
Lubricating oil	24,470	13,240
Crude benzine	9,368	8,582
Refined benzine and petroleum		
ether	1,180	1,387
Crude oil	1,540	1,297
Residuals	31	91
Artificial turpentine and other		
mixtures	104	83
Gas oil	383	98
Total	119,895	96,274

The imports from the different producing countries were as under, (in tons):—

	October.	September.
U.S.A.	83,043	67,764
Russia	12,773	10,552
Dutch India	8,117	7,038
Austria-Hungary	10,043	6,379
Roumania	2,217	2,611
Other countries of unknown		
origin	3,709	1,903
	119,896	96,274

The exports of various petroleum products from Germany in October were:—Lubricating oil, 1,019 tons; illuminating oil, 49 tons; residuals, 397 tons; benzine, 657 tons; in all, 2,122 tons.

LATEST NEWS FROM GALICIA.

From Tustanowice comes the news of an outbreak of fire which caused the death of two workmen and dangerous injuries to another. The fire occurred at the Roman well belonging to a Berlin firm. The cause had not at the time of writing been ascertained.

The production at Tustanowice remains unchanged. The falling off in the output of the old wells is made good by the newly completed wells. Quite recently well No. 2 of the Urycz Co. became productive with 70 tons daily, and well No. 2 of the Triumph Co. just completed, yields $7\frac{1}{2}$ tons daily. On the Sas plot of Messrs. K. Dzieduszycki and Co., well No. 1 has reached the oil stratum; preparations are now made to start a second well.

Messrs. Dlugosz and Laszez have in their well, No. 1, reached the second oil stratum 60-65 metres below the first one. Oil has been struck for the first time on the Wilno and Fortuna plots, and also in well No. 1 of the Galicia Co. at Tustanowice.

From Niebylow it is reported that Dr. Freund's well has reached a depth of 676 metres. The indications in the form of gas and oil traces are so good that the firm are going to shortly start three more wells there. The Niebylow Syndicate has obtained a concession to lay a pipe line from Niebylow to Krechowice station. The pipe will pass also through the Rypne field, where drilling is now likewise carried on with great activity.

THE REORGANISED PETROLEA COMPANY.

The first meeting of the reorganised committee of the Petrolea Co. took place recently. The following gentlemen were elected as representatives of the small producers:—Dr. Goldhammer, Messrs. Kiesler, Mendelsohn, Sęeman, Wolski and Count Zamoyski, while the following gentlemen became members as representatives of firms producing more than 6,000 tons half-yearly:—Messrs. Dlugosz, Dr. Fraenkel, Sochor and Sussmann. The Creditanstalt has nominated Mr. Neurath and Dr. Steczkowski as their representatives on the committee. The representatives of the Creditanstalt announced that although the new organisation had not by the 15th of November been joined by firms representing 95 per cent. of the total production, the rate of advance to producers will not be reduced till the 30th of November in the hope that, in the meantime, more firms would join.

NEW COMPANY.

BRITISH PETROLEUM COMPANY, LIMITED.

Registered November 21st, by Ince, Colt and Ince, St. Benet Chambers, Fenchurch Street, E.C. Capital, £500,000, in £10 shares. Objects: to acquire, win, refine, import, manufacture, store, export and deal in mineral, animal and vegetable oils; to manufacture and deal in the products of such oils; to purchase, lease or otherwise acquire petroleum and oil-bearing lands; to sink wells and make borings; to act as shipowners, carriers and wharfingers; to construct tanks, pipe lines reservoirs and other works and conveniences, etc. The signatories are:—

	Shares.
C. J. Newbolt, 110, Portland Road, South Norwood, S.E.	1
A. C. Woodford, 70, Gosberton Road, Balham, S.W.	1
F. B. Liley, 19-21, St. Ann's Road, Brixton, S.W.	1
A. W. Tydie, 25, Shakespeare Crescent, Manor Park, Essex	1
A. E. C. Greenwood, 53, Rectory Road, Walthamstow	1
F. E. Burrell, 24, Elsinore Road, Forest Hill, S.E.	1
F. Lake, 12, Elsham Road, Leytonstone, N.E.	1

No initial public issue. The first directors (to number not less than six) are to be appointed by the signatories. No qualification. Remuneration, as fixed by the company.

BATOUM PETROLEUM SHIPMENTS.

The following were the shipments of petroleum products from Batoum during the week ended 4th November, o.s. (in poods):—

	Illuminating Oil.		Other Products.	
	1905.	1906.	1905.	1906.
To Europe	—	90,000	414,000	629,000
To the East	—	235,000	52,000	1,000
To Russian Ports	126,000	110,000	1,000	5,000
From Jan. 1st to				
Nov. 4th:—				
To Europe ..	17,837,000	10,259,000	8,242,000	7,107,000
To the East ..	9,211,000	6,250,000	367,000	56,000
To Russian Ports	2,460,000	2,604,000	203,000	234,000

BAKU PRODUCTION DURING OCTOBER.

The total production of crude oil at the Baku oil fields during October (o.s.) amounted to 43,359,000 poods. The production of the leading firms during the month was as under : -

	Poods.
Nobel Bros.	5,200,000
Caspian and Black Sea Society	3,000,000
Mantacheff and Co.	2,500,000
Caspian Society	2,300,000
Baku Naphtha Co.	2,200,000
Moscow-Caucasian Co.	1,900,000
Melikoff and Co.	1,400,000
Russian Naphtha Co.	1,300,000
Zoubaloff	1,200,000
Aramazd Co.	1,200,000
Pitoeff and Co.	1,200,000
Naftalan Co.	1,100,000
Russian Petroleum and Liq. Fuel Co., Ltd.	1,100,000
Schibaieff and Co.	1,100,000
Baku Russian Petroleum Co., Ltd. ..	1,000,000
Assadulaeff	1,000,000
Bibi-Eybat Petroleum Co., Ltd. ..	900,000
Nagieff	800,000
Shikhovo Co.	700,000
Ter Akopoff Co.	600,000
Tumaeff and Co.	600,000
European Petroleum Co., Ltd. ..	500,000

OPERATIONS OF THE ROUMANIAN REFINERIES.

STATISTICS FOR THE FIRST NINE MONTHS OF 1906.

The statistics of the output of various products from the Roumanian refineries during the first nine months of 1906, compared to the corresponding period of 1905, have just been published. They are as under : -

	Nine Months. 1906 Tons.		Nine Months. 1905 Tons.	
Benzine	84,396	..	56,180	..
Illuminating oil ..	168,822	..	109,927	..
Lubricating oils ..	41,691	..	12,365	..
Residuals	253,544	..	170,666	..
Total	548,453	..	349,138	..

The quantity of crude oil submitted to distillation was 567,835 tons, or 89 per cent. of the total crude oil production. In the first nine months of 1905 the quantity submitted to distillation was 366,287 tons, or 85 per cent. of the total production.

The quantities delivered from the refineries for home consumption during the nine months were :—

	Nine Months. 1906		Nine Months. 1905	
Benzine	387	..	497	..
Illuminating oil ..	20,958	..	18,850	..
Lubricating oils ..	4,481	..	3,860	..
Residuals	165,333	..	112,404	..
Total	191,159	..	135,611	..

The stocks at the refineries on the 30th September were :—

	Sept. 30th. 1906 Tons.		Sept. 30th. 1905 Tons.	
Benzine	17,088	..	17,018	..
Illuminating oil ..	50,292	..	55,189	..
Lubricating oil ..	29,459	..	8,642	..
Residuals	71,272	..	67,118	..
Total	168,111	..	147,950	..

The yield of various products from the crude oil treated at the Roumanian refineries in the first nine months of 1905 was :—Benzine, 14·8 per cent.; illuminating oil, 29·7 per cent; lubricating oil, 7·3 per cent.; residuals, 44·6 per cent.

NEXT YEAR'S INTERNATIONAL PETROLEUM CONGRESS IN ROUMANIA.

Definite information is at last available with reference to the next International Petroleum Congress to be held in Roumania. This information is contained in a circular recently sent out by the Roumanian Government delegates to all parties interested in the subject. The circular reads as under :—

Sir,—We have the honour to inform you that the third International Congress of the petroleum industry will take place at Bucarest during the first 15 days of September, 1907. The duration of the Congress will be seven days, not reckoning two excursions which will last two days each : one before and one after the Congress.

In the excursions, to take place both before and after the Congress, the number of excursionists cannot exceed sixty for each excursion.

These excursions will have as their object to examine certain technical and stratigraphical conditions in several of the more important petroliferous regions in Valachia as well as Moldavia. The charge for tickets for each excursion will be fixed later, but will not in any case exceed 15 or 20 francs, everything included.

In order to be able to take the necessary steps to provide transport facilities and to organise the whole Congress, we will request you to kindly acquaint us of your adhesion, and to inform us whether you are disposed to participate in any or both excursions projected, in order that we may know whether the number of intending excursionists will not compel us to organise parallel excursions for the two days before as well as after the Congress. The questions which will be discussed at the Congress are those set out in the programme, which is practically identical with the one of the Liège Congress.

The duration of lectures will be limited to 45 minutes, and communications to 15 minutes at the outside. In order to be able to group the subjects and make better use of the time, we request that the titles of papers and communications shall be communicated to us before the 1st of May, 1907, as at other Congresses, an almost unanimous desire was expressed that papers and communications shall be made solely by a few specialists, generally recognised, and on questions which have been sufficiently well studied. Thus all explanatory remarks and questions must be submitted in the form of brief communications, well formulated and absolutely to the point, in order to avoid all unnecessary loss of time.

The text of the communications and reports must be delivered not later than the 1st July, 1907, especially if you wish that the subject which you are treating shall figure in the preliminary publications of the Congress. (Guide to the Congress). It is desirable that all papers and communications shall be submitted in one of the three languages : French, German, or English.

Besides the Congress, there will be organised also a small exhibition of scientific and technical works : collections, papers, samples from all sources, also various materials, instruments, apparatus, etc., connected with the petroleum industry and trade ; and the scientific and technical works objects, materials and anything which you wish to exhibit, kindly send, at the latest, by the 1st of July, 1907. The detailed programme of the Congress, excursions, exhibition, fêtes, and of the reduction of railway fares which will be obtainable will be sent out in our second circular.

THE BAKU OIL FIELDS AND THE RECENT DISORDERS.

HAVE THEY NOW RECOVERED?

To the question of "Have the Baku oil fields recovered from the catastrophies which overtook them some time ago?" a correspondent in the *Trade and Industry Gazette* endeavours to supply the answer.

He points out in his article that after the strike of oil-field workers came to an end, all the efforts of the producers were concentrated upon increasing the production of crude oil. To this end all wells worthy of any attention were put in exploitation, and the production in October was brought up to 43·3 million poods, which is the highest production obtained since the destructive fires in August, 1905, but is below the production of the months preceding that event. It is thus evident that notwithstanding the great efforts of the producers and the substantial aid of the Government, the Baku industry has not yet recovered from the effects of last year's disaster.

The following figures shew the slow progress which the industry had made towards regaining its old position:—

1905.				Number of Producing Wells.		Productions (in million) poods.
June	..	..	..	1,523	....	46·3
July	..	..	..	1,556	....	47·7
August	..	..	..	1,557	....	32·3
September	..	..	..	141	....	2·1
October	..	..	..	539	....	13·3
November	..	..	..	764	....	24·5
December	..	..	..	868	....	19·9
1906.						
January	..	..	..	1,013	....	34·2
February	..	..	..	1,171	....	31·1
March	..	..	..	1,316	....	38·7
April	..	..	..	1,400	....	41·5
May	..	..	..	1,467	....	42·1
June	..	..	..	1,247	....	38·5
July	..	..	..	1,141	....	22·7
August	..	..	..	1,275	....	26·4
September	..	..	..	—	....	39·3
October	..	..	..	—	....	43·3

It will be observed that up to last May the progress in the production and number of wells in exploitation was continuous with the exception of December. In May there were still about 100 wells to be put again on the producing list. If the fresh strike had not supervened the number of productive wells would now probably have been the same as before the events of August, 1905. This, however, is not sufficient in order to get the production back to its normal rate. The protracted inactivity of the wells has reduced their productivity, and even quite apart from this the productivity of a well declines with time, and, in order to keep up the total production, new wells have to be drilled continuously, and in this direction but little has been done during the past 12 months. As an example, it may be mentioned that in July, 1905, the average production per well per day was 1,060 poods, whilst in May, 1906, it was only 965 poods. In the following months the average must have been smaller still, as the more prolific wells had been restored, and only the poorer wells had been left to be put back into exploitation. The number of new wells completed from August, 1904, to July, 1905, was 234, and the aggregate length drilled was 371,875 feet. During the 12 months ended July, 1906, the respective figures were only 119 wells and 215,544 feet. It is clear from the above that a further substantial increase in production can be expected only from the drilling of fresh wells, and as but little fresh drilling was done during the last 12 months, some time must elapse before the production can return to its normal state.

LATE NEWS: BY TELEGRAPH.

BAKU PRODUCTION FOR THE FIRST HALF OF NOVEMBER.

The production of crude oil at the Baku oil fields during the first 15 days of November (o/s) amounted to 19,096,000 poods.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR JUNE AND JULY, 1906 (in poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

				Submitted to Distillation.			Products Received.			
				Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.
June	..	..	..	26,584,732	105,806	26,690,538	6,044,197	18,961,944	1,062,779	621,618
July	..	..	..	14,428,543	92,048	14,520,591	3,604,675	10,011,300	459,864	444,752

Refining

				Submitted to Refining.			Refined Products Obtained.			Chemicals used.	
				Kerosene.	Other Distillates.	Total.	Kerosene.	Other Products.	Total.	Loss in Refining.	Acid. Soda.
June	..	..	..	6,287,479	9,245	6,296,724	6,141,672	9,245	6,150,917	145,807	22,779 9,828
July	..	..	..	3,672,568	120,942	3,793,510	3,569,738	100,455	3,670,193	123,317	14,735 3,361

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

				Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
June	..	..	..	1,070,425	164,961	36,528	931,626	499,730	490,576	—	306,781	454,091
July	..	..	..	650,987	110,140	7,610	945,895	155,353	240	41,044	151,867	407,262

Refined Products Received.

				Spindle Oil.	Machine Oil.	Cylinder Oil.	Loss in Refining.	Chemicals used.	
								Acid.	Soda.
June	..	..	..	143,003	1,118,576	30,728	159,671	39,704	5,635
July	..	..	..	105,707	684,920	1,920	83,634	8,894	919

The output of benzine distillates amounted to 53,647 poods in June and 42,985 poods in July. The output of refined benzine was 29,534 poods and 32,210 poods respectively.

THE OIL FIELDS OF NEW ZEALAND.

ANALYSIS OF THE OIL.

Up to the present we have heard but little of the petroleum fields of New Zealand, but things point to these various areas receiving much attention in the near future. Opinions differ greatly as to the outlook, for while some gentlemen hold rather optimistic views in regard to the future development of New Zealand's petroliferous localities, others are not at all favourably impressed with the outlook. In this latter category we have Capt. H. Andrews, of Cleveland, who has recently made a careful study of New Zealand's oil fields, and furnished the *Oil City Derrick* with some interesting information concerning them.

The Taranaki oil field, which has been attracting the most attention, is the principal field in New Zealand, being located on the western side of North Island, about 135 miles due south of Auckland. New Plymouth is the nearest sea port, and the presence of oil and gas in the vicinity has been known for many years. About nine years ago a well was put down at Moturoa, close to the New Plymouth breakwater, and oil was actually struck at a depth of something over 1,900 feet. The supply, however, did not seem large, the prospecting company's capital was small, and all efforts to prevent water entering the pipe with the oil were unsuccessful. Then the derrick and the plant were burnt through the accidental ignition of the gas issuing from the well, and the prospecting movement languished. No further progress of a practical nature was made until last year, when Mr. C. Fair, on behalf of a company, started to put down a six-inch well, three or four hundred yards east of the old one. At a depth of 2,300 feet oil was struck, and the water was successfully excluded. It is the oil from the well that is reported to yield 40 per cent. of kerosene, but the refined article is of inferior quality; it clogs the wick and burns with a bad odour. Another well is being drilled in the same vicinity, and its completion is awaited with considerable interest.

The extent of the oil-bearing country is a matter upon which the experts differ. Mr. Fair, who has made a special study of the matter, believes he is boring near the edge of the field, which extends back towards Mount Egmont and in a northerly direction under New Plymouth towards the Mokau coal fields. Exact information as to the conditions prevailing 2,000 feet from the surface of the ground can be obtained only by means of wells, but the probabilities, judged by the general configuration of the country, seems to be that the Moturoa formation extends south and east for many miles.

According to the analysis of Thomas H. Easterfield, of Wellington, the New Zealand oil possesses the following characteristics:—

CRUDE OIL.—The sample was of a greenish colour, red by transmitted light, and without offensive smell. It was semi-solid at the ordinary temperature, but completely liquid at 80° F. It contains sufficient volatile matter to flash at the ordinary temperature. The

specific gravity was .84 at 65° F. The sample was free from water and grit.

DISTILLATION TEST.—When distilled the oil gave the following products:—

	Per cent.
Benzine distilling between 55 and 150° C. ..	20
Burning oil distilling between 150 and 300° C. ..	40
Heavy oil for lubricating between 300 and 440° ..	37
Pitch	2
Loss	1
Total	100

BENZINE.—The crude benzine has a specific gravity of .764 was colourless and had a pleasant odour. When redistilled it yielded 66 per cent. of naphtha, boiling between 58 and 120° C.

BURNING OIL.—The crude burning oil has a slightly yellow colour. When re-distilled it yielded water-white kerosene with only a faint bloom. The oil distilling between 150 and 270° had a specific gravity of .82. Treatment of this fraction with sulphuric acid and alkali scarcely effected the density of the oil, but removed practically the whole of the bloom. The lead oxide test indicated the absence of sulphur compounds.

HEAVY OIL AND PARAFFIN.—The heavy oil sets at the ordinary temperature owing to the deposition of solid paraffin. The maximum amount of paraffin scale which I obtained was equal to 13 per cent. of the crude petroleum. After pressing and remelting, the scale shewed a melting point of 130° F. The yield of paraffin wax in a properly arranged distillery, fitted with cold filtration, would be greater than in a laboratory experiment. The melting point of wax would also be raised by systematic sweating as carried out by the modern manufacturer.

LUBRICATING OIL.—The heavy oil filtered from the wax yielded, by the usual acid and alkali treatment, a reddish-brown oil of good appearance. The oil is a good lubricant and gave complete satisfaction when tested in the high pressure cylinder of a stationary engine.

It might here be mentioned that Sir James Hector questions the possibility of any extensive petroleum deposits in New Zealand, and bases his conclusions upon the geological formation.

For the past forty years the Taranaki field has at different times done its best to produce oil in paying quantities, while in the Gisborne district prospecting extends over 30 years. During that period a number of companies were formed, including the Southern Cross, the South Pacific Petroleum Co. and Bretts Option, yet though a number of wells were put down near surface indications, some with pole tools and others with American rigs, very little oil was found.

Russian Fuel Supplies—A committee of representatives of various Government departments under the presidency of the Minister of Commerce and Industry have begun deliberations on the question of fuel supplies for Russian industries, taking as a basis the conclusion of the conference recently held at St. Petersburg on the same subject.

GEORGE TWEEDY & Co.,

32, GREAT ST. HELEN'S, E.C.

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OILS, LUBRICATING OILS, LIQUID FUEL.***Agents for Great Britain:—***HENRY FUNCK & CO., 22, Billiter St., London, E.C.****CONTENTS.**

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SATURDAY, DECEMBER 8TH, 1906.

A GOVERNMENT AGAINST AN INDUSTRY.

WE should be guilty of great negligence if, at this crucial moment in the affairs of the American petroleum industry, we withheld our voice in connection with the agitation which is now being waged with all possible vehemence by the American President and his lieutenants against the ramifications of the of the Standard Oil Co. There are, of course, many pros and cons to be considered, but we must at the very outset lay it down in as plain a language as we possibly can, that a more deliberate attempt to undermine an important branch of a country's commerce has never been allowed to materialise.

The reading public, whether interested in the petroleum industry or not, has for many days past, been served with highly coloured articles of what are in some quarters regarded as the flagrant abuse of the rights of incorporation, so that it is necessary here for us to recite one or two of the main facts that have led up to the present position.

So far as the specific charges which are laid against the Standard Oil Co. are concerned, they can be dismissed in a few words, for to all common-sense individuals it must be quite a foregone conclusion that they will ignominiously fail, and the child-like ambition

of the American President be damped, now that the suit is to be fought in the highest courts of America, and in an atmosphere far above the aspirations of prejudice. The present trial will of necessity be shorn of party feeling and private animosity, and it is because of this, if for no other reason, that we are confident that in the end the Standard Co.—that much abused master-mind of the American petroleum industry—will emerge without a stain upon its successful career.

The Standard Oil Co. is, in a word, charged, together with some seventy other distinct corporations connected with the American petroleum industry, with having violated the Sherman anti-trust law, destroyed competition, and committed illegal acts in restraint of trade. We do not hesitate to say that we have no intimate knowledge with the several clauses comprised in the Sherman law of America, but it forcibly occurs to us that if this particular law directly aims at the prevention of great industrial organisations for the economic conduct of an important industry, then the better course would be to demand its revocation rather than use its illogical commands in order to destroy an enormous business enterprise whose chief fault appears to lie in the fact of its greatness.

The Standard Oil Co., which to-day is of such titanic proportions, has, for upwards of a quarter of a century, thrown all its energy and its almost unlimited financial resources into the development of the American petroleum industry upon business-like and carefully thought lines, which have been the means of bringing America in the very front rank of producing continents in the world, and also laying the basis for an international trade in petroleum products, the effects of which have long ago spread to the farthest ends of the earth. For over 30 years has this mighty guiding factor in America been silently at work in order that the petroleum industry might become that important factor in commerce which it was entitled to, and though attempts have been made from time to time by those who would glory to be popular idols to cast dishonour upon the Standard Oil Co., it has always passed through the trials successfully and vindicated itself up to the hilt. This being so, it is little less than absurd to conceive that for so long a period such an institution could have survived upon principles of roguery and rascality with a total disregard for either honesty or the laws of the country in which it operated.

Ruled by gentlemen of the strictest honesty and integrity, the combination of capital and skill known as the Standard Oil Co. has, from the very moment it set itself the colossal work of organising the American petroleum industry, pursued a policy with unswerving determination to live down prejudice or petty personal malice, and the esteem its less powerful opponents have for it is best seen from the fact that many independent petroleum producers are arraying themselves against the present agitation and standing on the side of the Standard Oil Co.

But let us look at the truthfulness of some of the charges hurled by the President against the company. We are told that it has destroyed competition and committed illegal acts in restraint of trade. We hold no

brief either for one side or the other, but we love fair play and justice. The Standard Oil Co., we must remember, has grown with the American petroleum industry, and the growth in each case has been proportionate and simultaneous. For the last couple of decades the industry in America has grown at a remarkable rate, and this growth has been directly the outcome of the operations of the Standard Oil Co. When outside capital hesitated to give petroleum its confidence, and when large sums were required to care for the great flood of oil from the fields of Pennsylvania or California, the Standard Oil Co. unflinchingly launched out and laid the very foundations upon which the greatness of the American petroleum industry now rests. What would have happened had not the Standard shewn this readiness to opportunely come forward with its assistance we dare not imagine, for events have proved that although the American oil fields have always been open to the investment of large sums of capital, comparatively little has come forward to assist in building up the industry. Need we have any further illustration than that presented in the Illinois fields to-day?

A few bands of operators struck a prolific store of oil, but scarcely was this above ground than the investment of large sums of capital was a matter of urgent necessity. Storage had to be built and pipe lines laid, or what was the good of the oil? In Illinois, as just prior in the fields of Kansas and Indian Territory, the Standard came to the rescue. It came not only as a buyer, but willingly did all an organisation controlled by human beings could do. It concentrated a deal of its energy in meeting the needs of the producers; it furnished capital for pipe lines, and drafted thousands of men into the territory there to work day and night upon the construction of iron storage facilities so that the oil could find a market. Does this savour of either destroying competition or restraining trade?

Surely the statement by the prosecuting counsel in the suit that there are 10 per cent. of independent refiners outside the Standard in the American fields is sufficient in itself to refute the contention that competition has been stifled. One of the essential principles upon which all competition exists is that the strong succeed and that the weak go to the wall, and it must to level-headed men come as a surprise to find that because this natural order of things exists in connection with the American petroleum industry, the chief organisation in that country is charged with having acted in restraint of trade.

As we have said, we have every confidence in the result of the present suit before the American courts—a confidence which is shared by the officials of the Standard Co. themselves, whose dignified letter to the shareholders is found upon another page. The pity of it all is that a Government whose policy should be to build up trade and commerce should seek to reverse the wheels of progress, and inflict, by this vexatious agitation, a very serious injury upon an industry which is ever increasing in its importance.

THE STANDARD OIL COMPANY AND THE AGITATION.

POINTED LETTER FROM THE DIRECTORS.

The Secretary of the Standard Oil Co. has recently sent out a pointed letter to the shareholders in regard to the present outlook in view of the agitation raised against the Standard. This letter, *inter alia*, states that the directors are entirely convinced that the company's position is unassailable from both a legal and moral standpoint. We are confident, proceeds the letter, that in the proceedings which will follow, the company will successfully maintain its position upon the merits, and vindicate it before the public and the law.

While your directors feel that there is no adequate reason for such a suit, either in the organisation or the conduct of the business, yet, under the circumstances, it is perhaps better for your interests and the business interests of the country that the controversy should be removed to the judicial atmosphere of the courts—in whose integrity and wisdom every citizen should have the fullest confidence—where mere allegation must give way to legal proof.

The present organisation was formed after an exhaustive consideration of the legal and business problems involved. It has existed unchallenged for many years. Everything relating to it has been a matter of public report, and at every step the utmost care has been observed to conduct the business honestly and fairly, and in accordance with not only the spirit but the technical requirements of the law.

The legal organisation of your company is of essentially the same nature and character as that of the other important industrial interests of the company, and the continuous growth and expansion of its business has been legitimate and normal. It is not to be lightly assumed that there is to be a reversal of the wheels of progress or a destruction of the foundations of the great industrial businesses of the country.

You may be assured that in this litigation, as in all matters affecting the company, your directors will see that the proper steps are taken to protect your interests.

DEVELOPMENTS IN THE GERMAN PETROLEUM INDUSTRY.

Some time ago we recorded the fact of the concentration of the German petroleum industry in the hands of a very few firms. One of the firms is the Deutsche Tiefbohr Actiengesellschaft, a rival concern to the International Tiefbohrergesellschaft, owners of the Raky system. Whilst the Raky concern devoted their energies largely to the development of the Roumanian oil fields, the Deutsche Co. has bought all the working concerns in the Alsace oil field and also acquired substantial interests in the Hanover oil fields.

In view of the great extension of its business, a general meeting of shareholders is called for the 11th December to consider a scheme of reorganisation. It is proposed

to increase the capital to 10,000,000 marks. The head office is to be transferred to Berlin, but the works will remain at Nordhausen. A special company is to be formed to take over the properties acquired by the company in the Hanover oil field.

The Pechelbronner Oil Co., the largest of the Alsace concerns taken over by the Deutsche Boring Co., is to be wound up, and a meeting for that purpose has been called for December 20th.

LAUNCH OF A NEW OIL TANKER.

Messrs. Napier and Miller (Limited), Old Kilpatrick, a few days ago launched a sailing vessel built to the order of Messrs. Lever Bros. (Limited), Port Sunlight. The vessel has been specially designed to carry oil in bulk or general cargo, and will carry about 2,200 tons on a light draught of water. She is 230 feet long, with a beam of 37 feet, and has been fitted with nine bulkheads, as well as a fore and aft division in the oil space, forming ten oil compartments, as well as general cargo 'tween decks and fore hold and two peaks. A large boiler has been fitted with feed and general donkey pump, also two powerful duplex double-acting pumps for dealing with oil cargoes, which can be rapidly discharged, also steam winch for working general cargoes and windlass and capstans for handling the vessel. A fresh water condensing plant and exhaust tank have also been fitted. The crew are housed in the forecabin, and the captain and officers in the poop, and room has also been provided for apprentices. The vessel, which will be rigged as a barque, was named "Sunlight" by Mrs. Tillotson, wife of Mr. Tillotson, general manager of the firm of Messrs. Lever Bros. The "Sunlight" has been built to the specification and under the superintendence of Messrs. Flannery and Given, of Liverpool, London, and Rotterdam, and as soon as she is rigged will load a general cargo from Glasgow.

PETROLEUM TRADE IN FRANCE.

The imports of petroleum products into France during the first eight months of 1906 were as follows:—Crude oil, 111,292 tons; refined oil and petroleum spirit, 1,345,200 hectolitres; lubricating oil and residuals 62,190 tons; paraffin scale, 981 tons; ozokerite, crude and refined, 430 tons.

According to the countries of origin the imports were as follows:—Crude oils, Russian, 5,340 tons; United States, 94,119 tons, and other countries, 20,756 tons. Refined oil and benzine, 51,100 hectolitres; United States, 771,400 hectolitres, and other countries, 522,700 hectolitres; lubricating oil and residuals, Russian, 18,392 tons; U.S.A., 40,266 tons, and other countries 3,531 tons.

The stocks of petroleum products in France at the end of September were as under:—Refined oil and benzine, 77,379 tons; lubricating oil and residuals, 23,608 tons; and crude oil, 80,289 tons.

FROM INDIAN TERRITORY TO THE MEXICAN GULF.

TWO TRUNK PIPE LINES TO BE LAID.

In the last few issues of the REVIEW we have referred to the developments proceeding with reference to the proposed pipe lines to the Gulf of Mexico from the Mid-Continental fields of America. At the present time we can state with certainty that two trunk pipe lines will be pushed forward with all possible speed across the 400 miles of intervening territory, one of these pipes, as we have already announced, being constructed by the Texas Co., which, with this end in view, has increased its capital by \$6,000,000. The other pipe which is to be laid is to be put down by the Guffey and Gulf Companies as soon as the necessary material can be secured.

In connection with the latter-mentioned scheme, we have received an official intimation from the Gulf Refining Co. as under : —

“A majority of the stockholders and bondholders of the J. M. Guffey Petroleum Co. and the Gulf Refining Co. have agreed upon a plan of reorganisation in order to enable the joint interests to construct a pipe line connecting the present J. M. Guffey Petroleum Co. pipe lines in Texas with the Indian Territory oil fields, a distance of about 435 miles, so as to obtain a supply of Indian Territory oil, which is a much higher grade and more suitable for refining purposes than Texas oil. Contracts for pipe and tankage have already been let, and it is the expectation to commence taking oil from wells in the Indian Territory oil field within the next two months. Pending completion of the pipe line, it has been arranged to ship 4,000 to 5,000 barrels per day of Indian Territory oil to Port Arthur by tank cars.”

Needless to state the producers in the Mid-Continent fields view the new order of things with satisfaction, for additional outlets for their great production have been greatly desired for a long time. We learn that for some weeks past, representatives of the Guffey and Gulf interests have been in the field at Tulsa, where land has now been secured for tank sites, pumping stations, and other equipment which will constitute an extensive crude oil gathering system.

It will be noted that the Tulsa district is the one which is especially attracting the attention of the Gulf coast oil interests. This territory is the newest of the dozen or so rich portions of the Indian Territory and Oklahoma oil fields, and is looked upon by many operators as giving promise of being the best. Development work here, however, has not been rushed, but nevertheless the present capacity of the completed wells is nearly 40,000 barrels daily. Up to the present, the Prairie Oil and Gas Co. has been practically the only purchaser, having taken the major portion of the production, the other having gone into storage tanks which the Prairie has been erecting day and night.

ANOTHER NEW OIL FIELD IN TEXAS.

A GUSHER STRUCK AT HOSKINS' MOUND.

Texas is on the eve of another oil land boom, for a new and prolific territory has been encountered in Brazoria county at a spot known as Hoskins' Mound, 40 miles south of Houston near the Gulf Coast.

Development work has been proceeding at Hoskins' Mound for some time ; in fact, in the REVIEW we have on more than one occasion spoken of the prospects of this portion of Texas for oil developments. But in spite of a few test wells having been sunk, no results have been obtained until quite recently. As yet only one well has been brought in, this having a daily capacity of between 3,000 and 4,000 barrels. Two other wells are, however, being drilled, and expected to reach the oil sands shortly, for the producing well was completed and brought in at a depth of 576 feet.

The new producing locality is quite near to the Gulf, Colorado and Santa Fe Railway, and nine miles south of Liverpool on the St. Louis and Mexico Railway, which is a branch of the San Francisco system. The nearest railway station is Danbury, and to this a pipe line has been laid, while now preparations are being pushed forward to lay a pipe line to the Gulf of Mexico, which is only half-a-dozen miles away.

The general opinion is that the district of Hoskins' Mound will soon be one of the largest producing territories in the United States, but in any case its situation has certainly no equal throughout America.

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RUSSIAN... ANDROUMANIAN... NOTES.

Strike at Gura Ocnița.—Well No. 15 of the International Co. at Gura Ocnița, Roumania, has struck oil at a depth of 250 metres. The output varies between 25 and 30 tons per day.

Activity at Tzinta.—The very meagre results lately obtained by drilling at Baicoi have relaxed the activity which prevailed in this district, and which has now been partly transferred to the neighbouring district of Tzinta.

To Drill at Zabrat.—The Mines Bureau of the Caucasus have granted permission to Mr. James Whishaw to commence the exploitation of petroleum on plot No. 94 at Zabrat, near Baku, leased by him from a local inhabitant.

Chatma Concessions.—The Tiflis provincial authorities have granted the following concessions for the exploitation of petroleum at Chatma: to Mr. Andreas Utz on plot No. 297, having an area of 24½ acres, and to Mr. I. Rolke on plot No. 418, of an area 27 acres.

Baku Production on Government Lands.—During the first nine months of this year the quantity of crude oil produced on Government lands at Baku, on which royalties are paid amounted to 138,547,190 poods, or 44 per cent. of the total production during that period.

Another Roumanian Spouter.—The borehole of Mr. G. Stefanescu, at Cal'net, has commenced spouting. The production promises to be very abundant. M. Van de Werk's well in the same locality has also reached the oil stratum. Messrs. Ruzicka, Elias and Taubes are also preparing to drill there.

Dearth of Sulphuric Acid.—During August and September there was felt a great shortage of sulphuric acid at the Baku refineries, and work had to be stopped frequently owing to the excessive accumulation of distillates. Towards the end of September an improvement took place in this direction and acid became more plentiful.

A New Boring System.—The *Moniteur du Pétrole Roumain* is informed that a boring firm of Heirlen, Holland, is about to establish a contract boring business in Roumania, with a system similar to the Raky system. The firm in question are already putting up the necessary installations; they are represented in Roumania by Mr. Koster.

The Consolidation of Roumanian Concessions.—Among the bills to be introduced in the session of the Roumanian Parliament recently opened, is one to modify the law for the consolidation of petroleum concessions. A commission, consisting of Mr. L. S. Catargi, Mr. Panaitescu, Mr. G. Negulescu and Mr. L. Elefterescu, with Mr. A. Badarian as president, has for some time been preparing the material for this new law.

Liquid Fuel Contracts.—Contracts for the supply of liquid fuel to the Moscow-Kursk and Nijni-Novgorod Railway to the extent of 10,000,000 poods were given out by tender on the 23rd of November. Nobel Bros. obtained the contract for 8,000,000 poods, delivered at Nijni-Novgorod during the year to end 15th May, 1908, at 36 copecs per pood. Mr. Assadulaeff obtained a contract for 2,000,000 poods, delivery at Nijni at 35½ copecs during the navigation of 1907.

The International Roumanian Petroleum Company.—The annual meeting of the International Roumanian Petroleum Co. took place at Amsterdam on the 1st of December. The gross profit earned in the past financial year was 566,000 florins, against 660,000 florins in the preceding year. The dividend received from the Aurora Co. was 81,000 florins, and commission 155,000 florins. The working expenses amounted to 259,000 florins, against 168,225 florins last year, an increase of 54 per cent. The net profit is 502,500 francs against 613,064 francs in the preceding year. It was resolved to distribute a dividend of 6 per cent., which is the same as last year. The production of crude oil during the year was 45,000 tons, which is 20 per cent. less than in the preceding year.

To Drill at Sakhalin.—In January next an engineer named Kuznetzoff is expected to arrive in Sakhalin to commence the exploitation of Mr. Zotoff's petroleum concessions near Nyisky Bay in the Russian part of Sakhalin Island.

Nijni-Novgorod Stocks.—The stocks of petroleum products at Nijni-Novgorod and district on November 1st (o/s) were:—kerosene, 765,000; crude, 1,765,000 poods; residuals, 17,656,000 poods; total 20,181,000 poods.

Suggested Increase in Capital.—An extraordinary general meeting of the Steaua Romana is called for the 19th of December to consider the question of increasing the capital of the company, a step which has become necessary in consequence of the great extension which has taken place in the company's business.

The Anapa District.—Count Kankrin, owner of petroleum prospecting wells, near Anapa, on the Black Sea, is endeavouring to obtain the permission of the Government to the laying of a pipe line from his wells near the village of Suvorovo-Tcherkeskaia to the Black Sea, where he proposes to load the crude oil on steamers.

The Aquila Franco-Romana Co. has purchased all the assets of the Mislishora-Bustenari Co. for 476,000 francs, and propose to greatly develop boring operations on the properties taken over. The Aquila Co. has also commenced the erection of a refinery near Ploesti of a capacity of 150 to 200 tons per day, with the possibility to increase.

Roumanian Exports.—The exports of petroleum products from Roumania in October amounted to 36,047 tons, of which total, crude, distillate, gas, oil, etc., amounted to 12,369 tons; illuminating oil, 12,236 tons, and benzine, 11,442 tons. The largest quantities were exported to the following countries:—England, 14,056 tons; France, 14,826 tons, and Holland, 4,232 tons.

The Russian Standard Petroleum Company, representing the Rothschild interests in the production and export of Grosny oil in 1905, earned a net profit of 224,441 roubles on a turnover of 4,427,094 roubles. The whole profit was applied for amortisation of the company's property. The share capital is 1,115,625 roubles; the property and plant figure in the balance sheet at 3,448,470 roubles. There are creditors to the extent of 3,238,441 roubles.

The Tchimon Petroleum Company, of Ferghana, has notified the local cotton cleaning works that owing to the large daily deliveries of liquid fuel which have to be made to the Central Asian Railway, the railway will from the 1st November (o/s) not supply any tank waggons for oil destined for private people. The owners of the cotton cleaning works have asked the railway authorities to take their interests into account and to reconsider their decision.

To Bore by Contract.—A company has been registered in Roumania under the title of Société Anonyme Roumaine Raky for the purpose of undertaking boring by contract for other firms, and also produce and refine petroleum for its own account. The founders are the International Boring Co., Mr. Raky and his associates in the last-mentioned concern. The capital is 2,000,000 francs, which has been fully subscribed and paid up to the extent of 30 per cent.

Czaritzin to Warsaw via Germany.—Nobel Bros. have petitioned the Russian Government for permission to transport kerosene to Warsaw over Germany via Danzig and the Vistula. Messrs. Nobel explain that the transport of kerosene to Warsaw via Czaritzin or Saratoff by rail, a distance of 1,800 versts costs 52 copecs per pood, whilst by the Volga and canal route to St. Petersburg, and thence by sea to Danzig, and in barges by the Vistula to Warsaw, will cost only 46 copecs per pood.

THE BROXBURN OIL COMPANY.**PROPOSED SUBDIVISION OF ORDINARY SHARES.**

In the course of a circular issued to the shareholders of the Broxburn Oil Co., Ltd., it is stated that the directors have decided to recommend to the shareholders that the £10 ordinary shares, £8 10s. paid, be subdivided into £1 shares, with 17s. per share credited as paid. To enable this subdivision to be made, it is necessary that the articles of association be altered by special resolution. The directors recommend that the company should, at the same time, avail itself of the opportunity of making other much-needed alterations in the articles of association. Framed, as they were, on the incorporation of the company nearly thirty years ago, many of these articles are not now in accordance with everyday practice and requirements. To effect, in the first instance, the alterations in the articles of association, and subsequently to accomplish the subdivision of the ordinary shares, four extraordinary meetings of the company will have to be held. The first was held last Wednesday.

MESSRS. FRASER AND CHALMERS, LTD.**A SATISFACTORY REPORT.**

The report for the year of Messrs. Fraser and Chalmers, Ltd., ended June 30th, states that business has been very satisfactory, not only in the company's manufactures, but also in the large agency sales of other materials. A portion of the profit shewn is due to the receipt of payment for some large contracts executed during the preceding year, but only appearing in the accounts of the same at cost, as delivery had not been completed. Additions to the works at Erith have been completed, and an expenditure of £17,968 on this account appears in the balance sheet. The year under review has seen the largest output from Erith since work was begun there. The current year has opened well, with a good supply of work in hand. A fair start has been made in the manufacture of steam turbines, and several of these are now in successful operation, while a number of orders are at hand. The works at Erith are kept in a state of

thorough repair and efficiency; but the annual writing down of buildings and plant is continued, and applies on the latest additions and new tools as well as on the older property. The item of "patents" has been written down liberally in the accounts, although the interests of the company in patented machinery and in special licences of inventions are of great business value. A special allowance of £2,508 has been made from the year's earnings for depreciation of real estate, buildings and offices, as a measure of precaution. The profit for the year of £45,852, with £85,339 brought forward, makes a total of £132,202. A final dividend of 6 per cent. on the ordinary shares and 2½ per cent. on the preference shares is now proposed, which will amount together to £24,255, making 10 per cent. on both classes of shares for the year, leaving £88,102 to be carried forward.

LATEST INFORMATION FROM GROSNY.

The water spouter from well No. 72 of the Akhverdoff Co. stopped flowing on the 24th October (o.s.), after having been active for eight days. Fortunately it had no effect on the neighbouring wells Nos. 24, 62, and others, which are geologically connected with it. The first two continued to spout oil without any admixture of water. After the water spouter ceased flowing, it was found that more than one column of casing was broken, and the drilling tools had become wedged in the borehole, which must be considered as lost. It is feared that the oil deposit may suffer some damage from the water.

Well No. 38, on the Yermoloff plot, has been spouting since 1902, and another well is being completed close to this one. The Voiskovoi plot, with the wells now on it, could have yielded as much as 20,000 poods per day, but there is felt a lack of steam. The total production of the Akhverdoff Co. now is from 40,000 to 45,000 poods per day. Another well, No. 35, is nearing completion on the Voiskovoi plot, and there are indications that it will yield good results. In view of the fact that the Akhverdoff Co. hold the best plots in the Grosny oil fields, it is considered that they are not pressing forward developments as they should do.

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The Petroleums of North America.

By Mr. CLIFFORD RICHARDSON.

Being a Comprehensive Account of the Constituents of American Petroleum.

(Continued from page 296.)

The residue from these distillates have been found by the writer to be very rich in scale paraffin, as shewn by the following results:—

PHYSICAL PROPERTIES.

Specific gravity, 25/25°	..	..	..	..	9355
Flash	..	..	..	..	233°

CHEMICAL CHARACTERISTICS.

Loss, 160°, 7 hours	..	..	..	..	2%
Character of residue	..	..	..	..	Soft.
Loss, 200°, 7 hours	..	..	..	..	7.8%
Character of residue	..	..	..	..	Soft.
Bitumen soluble in 88° B. naphtha, air temperature—Pitch	..	..	..	..	4.7%
Per cent. of soluble bitumen removed by H ₂ SO ₄	..	..	..	..	10.0
Per cent. solid paraffins	..	..	..	..	19.0%

That such a large percentage of solid paraffin adds to the stability of the residue is seen by the fact that but 10 per cent. is removed on treating it with naphtha solution with strong sulphuric acid. The showing in this respect is in contrast to that of the residues from the the Pennsylvania and Ohio oils, where the amount removed reached 20 per cent.

From the preceding data it appears that the Canadian oil, like that from Pennsylvania and North-western Ohio may be classed as a paraffin petroleum, since it contains a predominating amount of hydrocarbons of the C_nH_{2n+2} series, especially in the solid form. It differs from these petroleums in that the amount of distillate below 150 degrees is very much smaller, while the sulphur derivatives of the polymethylenes are present in very much larger amount, as are the aromatic and unsaturated hydrocarbons in the lower distillates, where the higher residues contain larger percentages of the solid paraffins and less unsaturated hydrocarbons. It resembles Ohio oil in having the lower liquid asphaltic hydrocarbons as components.

Colorado Fields.

Petroleum is found in several localities in Colorado, but the source of the principal industrial supply is in the Florence oil field. It is situated in Fremont county, in the valley of the Arkansas river, in close proximity to the eastern base of the Rocky Mountains. The oil, a paraffin one, is contained in strata which are considered to belong to the Fort Pierce group of the Montana cretaceous. The crude petroleum is of a dark green colour, of not unpleasant odour, and has an average gravity of .8696, 31 degrees B. It contains but a very small percentage of naphtha, and yields from 35 to 40 per cent. of illuminating oils.

The hydrocarbons composing this distillate are largely of the C_nH_{2n+2} series, but the individual members have not been isolated nor is it known at what point hydrocarbons in which the percentage of hydrogen to carbon is smaller, begins.

The residuum is rich in paraffin. An examination by the writer resulted as follows:—

PHYSICAL PROPERTIES.

Specific gravity 25/25°	..	..	..	..	9268
Flash	..	..	..	..	221°

CHEMICAL CHARACTERISTICS.

Loss 200°, 7 hours	..	..	..	..	2.4%
Character of Residue	..	..	..	..	Soft
Bitumen insoluble in 88° B. naphtha, air temperature—pitch	..	..	..	..	1%
Per cent. of soluble bitumen as removed by H ₂ SO ₄	..	..	..	..	19.0
Per cent. of solid paraffins	..	..	..	..	10.4
Fixed carbon	..	..	..	..	1.6%

It will be seen that this residuum is quite similar to that from the eastern paraffin oils in all respects.

Petroleum is also found near Boulder, Boulder county, which in its crude state has a very low gravity .8116, 42.5 degrees B., corresponding to that of Pennsylvania oil. This oil, however, has not yet reached a position of

great industrial importance. Unlike the Florence oil it carries 17 per cent. of naphtha.

Wells have been drilled in 13 other counties in the State, but no supply of importance has been developed.

Wyoming Field.

Petroleum occurs, rather widely distributed, over the State of Wyoming. Industrially the amount produced is of small importance, being only 11,542 barrels in 1904, and coming from the Salt Creek oil field in Johnson and Natrona counties, about 50 miles north of Casper, on the Forth Platte River.

The oils are rather heavy, having density of .91, 23.9 degrees B. It is found in the sands in the horizon below the Fox Hill group of the cretaceous, although some may be found in the tertiary and in strata as old as the carboniferous.

The petroleum of Wyoming has not been examined with any degree of thoroughness, but sufficiently to shew that it leaves an asphaltic residual pitch on distillation, although paraffin scale has been observed with some distillates. It is a dark-green oil of reddish-brown colour by transmitted light.

According to the late Prof. W. C. Knight, of the University of Wyoming, on distillation with superheated steam distillates were obtained having a specific gravity as high as .97, 14.3 degrees B., and over, while little or none was obtained lighter than .860, 3.8 degrees B.

In other parts of the State, oils have been examined by Knight, having the same density and character as that from the Salt Creek field, but containing noticeable percentages of sulphur .10 to .30, while in the so-called Bonanza field an oil of .845 gravity, 35.7 degrees B., occurs, carrying but .015 per cent. of sulphur and containing 10 per cent. of distillate below 150 degrees.

A petroleum having a gravity of .916, 22.8 degrees B., obtained in the vicinity of Newcastle, Weston county, separates, according to Knight, paraffin scale.

From other parts of the State petroleum having a density as high as .98, 12.9 degrees B., is found, and it appears, therefore, that the character of the petroleum of Wyoming is most varied, ranging from a comparatively light oil of density .81, 42.8 degrees B., to the heavy asphaltic oils of density .98, 12.9 degrees B.

California Field.

Petroleum is found in California principally to the south of the latitude of San Francisco, although prospects occur to the north of this which are at present of smaller industrial importance. The fields lie on either side of the Coast Range, those originally developed being along the sea coast in Santa Barbara, Ventura, Los Angeles and Orange counties, while the largest fields are in the central valley of the State, to the east of the range in Fresno and Kern counties, these two producing by far the largest amount of any in the State, although the latter may be developed only within the last six or seven years. Oil is also produced on a smaller scale in San Mateo and Santa Clara counties.

The oil-bearing strata are from eocene to pilocene age, which are reached in depths of from 300 to 3,000 feet.

The production of petroleum in California is the largest in amount of that of any State in the Union, although as a field that of the Appalachian is greater. It has increased sevenfold since 1900. Owing to its inferior character for the production of illuminating oil, the output is only one-fifth in value.

The density of California petroleum varies from .8235, 40 degrees B., for some from Colusa county, .8485, 35 degrees B., for that found in Santa Clara county, and from Fresno county, to .9859, 12 degrees B., in Santa Barbara county. In colour, the oil varies from yellow to almost black.

As can be seen from its varying density, California

petroleum is quite varied in character. The densest oil is found in the Summerland field in Santa Barbara county, in Los Angeles county, and in the Sunset field of Kern county. The characteristics of the oils can conveniently be taken up by counties or fields.

Santa Barbara County—Summerland Field.

A specimen of the dense Summerland oil collected by the writer and distilled *in vacuo* at a pressure of 26 mm. gave 55 per cent. of distillate, which was collected in 15 fractions, having the following specific gravity at 20 degrees :—

Fraction.	Sp. Gr.	Fraction.	Sp. Gr.
1 .. .. .	.8712	9 .. .. .	.9618
2 .. .. .	.8833	10 .. .. .	.9678
3 .. .. .	.8893	11 .. .. .	.9738
4 .. .. .	.9034	12 .. .. .	.9802
5 .. .. .	.9155	13 .. .. .	.9830
6 .. .. .	.9335	14 .. .. .	.9900
7 .. .. .	.9417	15 .. .. .	.9939
8 .. .. .	.9477		
Residue 45 per cent. A hard asphalt.		Refractive index—1.542 Penetration—66	

The highest boiling fraction has a density very nearly that of water and a refractive index of 1.542. The residue consisted of a hard residual pitch. On redistilling the first fraction at the same pressure, distillates began to come over at 105 degrees, having a specific gravity of .8460, 35.5 degrees B., and a refractive index of 1.460. Paraffin scale could not be separated from any of the fractions on exposing them to an extremely low temperature.

Mabery has examined this oil in considerable detail. He found that a sample which he obtained having a specific gravity of .9845, 12.2 B., had the following ultimate composition.

	Per cent.
Carbon	86.32
Hydrogen	11.70
Nitrogen	1.25
Sulphur .. .. .	.84
100.11	

His distillates were of a character similar to those found by the writer. He continued his fractionation until heaps were obtained at certain temperatures. After purification with sulphuric acid and caustic soda he examined the saturated hydrocarbons thus obtained, with the following results :—

HYDROCARBONS SEPARATED FROM SANTA BARBARA (CAL.) PETROLEUM.

Symbol.	Boiling point.	Sp. Gr. at 20°	Refrac. Index.
C ₁₃ H ₂₄ ..	150-155° 60 mm.	.8621	1.4687
C ₁₆ H ₃₀ ..	175-180 60 mm.	.8808	1.4700
C ₁₇ H ₃₀ ..	190-195 60 mm.	.8919	1.4778
C ₁₈ H ₃₂ ..	210-215 60 mm.	.8996	1.4814
C ₂₄ H ₄₄ ..	250-255 60 mm.	.9299	—
C ₂₇ H ₄₆ ..	310-315 60 mm.	.9451	1.5146
C ₂₉ H ₅₀ ..	340-345 60 mm.	.9778	—

The most volatile of these fractions belong to the C_nH_{2n-2} series. With the third the series becomes C_nH_{2n-4}, and with the sixth C_nH_{2n-8}, the density of the last fraction and its boiling point being extremely high. A hydrocarbon of the C_nH_{2n-2} series of a very similar molecular weight has also been separated by the writer from Trinidad asphalt and found to have the following physical characteristics :—

Boiling point	147-170° at 30 mm.
Specific gravity .. .. .	.8576
Beaume	33.20
Refractive index	1.465
Carbon	86.86%
Hydrogen	13.34

The resemblance between the physical properties and ultimate composition of these fractions with some of those obtained by Mabery renders it probable that the same series are present in Trinidad asphalt as in California oil. The latter oil is, without doubt, extremely asphaltic in nature, as is evident from the fact that it leaves 45 per cent. of hard pitch, resembling asphalt, on distillation *in vacuo*.

On distillation with steam of the sludge obtained from treating the above distillates with strong sulphuric acid,

the sulphur derivatives of the petroleum, the presence of which is shewn by the ultimate analysis, have been recovered by the writer and found to correspond to those obtained in Canadian oil.

On treatment of the distillates with dilute sulphuric acid, one to four, the nitrogen derivatives, the presence of which is also shewn by the ultimate analysis, can be recovered. They are probably hydroquinolenes. Their examination has been undertaken by Mabery. He finds that fractions of the nitrogenous oil, separated by repeated distillation, have the following composition :—

130-340°	C ₁₂ H ₁₇ N	223-225°	C ₁₅ H ₁₉ N
197-199	C ₁₃ H ₁₈ N	243-245	C ₁₆ H ₁₉ N
215-217	C ₁₄ H ₁₉ N	270-275	C ₁₇ H ₂₁ N

Santa Barbara County—La Graciosa District.

In the interior of Santa Barbara county, Santa Maria, in the Graciosa Hills, petroleum has been produced in large amounts very recently from wells which were opened up towards the close of the year 1903, on the Careaga Ranch. This oil has a specific gravity of about .85, 34.7 degrees B., and yields about 36 per cent. of distillate below 200 degrees. It is much lighter than that from the Summerland field, and consequently of much greater value. It has not yet been examined in any detail.

Los Angeles and Orange Counties.

The oil produced in Los Angeles county is of two kinds. That in the district including and immediately adjoining the city of Los Angeles being a heavy oil, of an average density, .9790, 13 degrees B., with extremes of .9859 and .9396, 12 and 19 degrees B., and largely associated with water. In two other districts, one adjoining the oil fields of Orange county and the other those of Ventura county, lighter petroleums are found. The former produced petroleum having a density of .9655, 15 degrees B., to .9211, 22 degrees B., while the latter, in Pico Canyon, furnishes one of the lightest oils found in the State, having a density of about .84, 36.7 degrees B., yielding, according to Cooper, the following distillates :—

	Per Cent.
Under 100°	10.5
100-150	20.4
150-200	13.8
200-250	13.0
250-300	11.1
Residue	31.2
100.0	

Solid hydrocarbons are separated from some of the distillates of this oil on cooling, and it has been stated that these are paraffins, and that at one time they are extracted on an industrial scale. These solid hydrocarbons have not yet, however, been identified as paraffins by any acceptable authority. Solid hydrocarbons which are not paraffins have been separated from some of the oils from Ventura county, as will appear later.

A distillation of the petroleum from the Eastern Los Angeles county field, which was carried out by the writer, resulted as follows :—

Fraction.	Per Cent. Distillation.	Spec. Grav. 20/20°	Refrac. Index.	Colour.
26 mm.				
136-178°	3.7	.8654	1.474	Light red
178-198	3.8	.8760	1.480	Deeper
198-205	3.8	.8865	1.486	Deeper
205-232	3.7	.8986	1.495	Deeper
232-235	3.8	.9101	1.502	Deeper
235-240	3.8	.9196	1.509	Deeper
240-254	4.0	.9314	1.517	Deeper
254-265	4.1	.9420	1.523	Deeper
365-289	4.0	.9502	1.530	Deeper
289-293	4.0	.9743	1.533	Deeper
293-298	4.8	.9796	1.536	Deeper
Residue	59.0	—	—	Reddish - black, very viscous, but flows slowly

LOSS BY TREATMENT WITH DIFFERENT REAGENTS.

Fraction.	Sodium hydrate NaOH. Per Cent.	2-1 Sulphuric Acid, H ₂ SO ₄ . Per Cent.	Conc. Sulphuric Acid. Per Cent.
130-178°	1.6	1.2	3.3
178-198	0.8	2.1	6.3
198-205	1.5	2.3	6.8

(To be continued.)

AMERICAN PETROLEUM EXPORTS.

STATISTICS FOR OCTOBER.

According to the official publication of the Washington Bureau of Statistics, the exports of petroleum from America from the various ports during October were as under:—

		1905. Quantities. Gallons.	1906. Quantities. Gallons.
CRUDE—			
Baltimore	.. ..	—	—
Boston and Charlestown	.. ..	—	—
Delaware	.. ..	8,623,729	1,483
New York	.. ..	—	7,877,454
Philadelphia	.. ..	2,046,610	4,338,757
Galveston	.. ..	1,263,158	—
Total	.. ..	11,085,427	12,217,694
Total value for the month, 1905..	.. ..		\$604,533
" " " 1906..	.. ..		\$674,239
NAPHTHAS—			
Baltimore	.. ..	—	1,760
Boston and Charlestown	.. ..	3,120	—
Delaware	.. ..	—	—
New York	.. ..	762,134	208,042
Philadelphia	.. ..	963,930	1,940,411
Galveston	.. ..	—	—
Total	.. ..	866,002	2,974,007
Total value for the month, 1905 ..	.. ..		\$159,446
" " " 1905 ..	.. ..		\$194,057
ILLUMINATING—			
Baltimore	.. ..	2,824,883	—
Boston and Charlestown	.. ..	85,366	24,780
Delaware	.. ..	—	—
New York	.. ..	41,334,548	41,074,168
Philadelphia	.. ..	27,995,729	31,558,416
Galveston	.. ..	3,084,641	2,502,602
Total	.. ..	75,325,167	75,163,966
Total value for the month, 1905 ..	.. ..		\$4,672,315
" " " 1906 ..	.. ..		\$4,760,533
LUBRICATING—			
Baltimore	.. ..	180,450	213,811
Boston and Charlestown	.. ..	11,829	22,655
Delaware	.. ..	—	—
New York	.. ..	8,337,152	7,887,900
Philadelphia	.. ..	3,483,527	3,740,771
Galveston	.. ..	—	613,769
Total	.. ..	12,012,958	12,478,906
Total value for the month, 1905 ..	.. ..		\$1,368,762
" " " 1906 ..	.. ..		\$1,482,567
RESIDUUM—			
Baltimore	.. ..	—	—
Boston and Charlestown	.. ..	180,000	260,000
Delaware	.. ..	—	—
New York	.. ..	2,125,902	4,027
Philadelphia	.. ..	784,597	3,172,127
Galveston	.. ..	10,500	903,756
Total	.. ..	3,100,999	4,339,910
Total value for the month, 1905 ..	.. ..		\$97,365
" " " 1906 ..	.. ..		\$143,318
TOTAL MINERAL OILS—			
Baltimore	.. ..	3,005,333	213,811
Boston and Charlestown	.. ..	278,955	310,555
Delaware	.. ..	7,775,658	—
New York	.. ..	52,005,644	49,729,712
Philadelphia	.. ..	36,250,874	47,312,698
Galveston	.. ..	4,358,299	8,362,884
Total	.. ..	103,674,763	105,929,660
Total value for the month, 1905 ..	.. ..		\$6,902,421
" " " 1906 ..	.. ..		\$7,254,714

YOKOHAMA PETROLEUM IMPORTS.

There were no petroleum imports into Yokohama during September, whereas for the corresponding period a year ago 21,990 gallons were imported, amounting to a value of 5,278 yen. The total quantity of petroleum imported into Yokohama since the commencement of the year has reached 10,820,131 gallons.

AMERICAN NOTES

Spindle Top.—Since Lucas drilled the first gusher on Spindle Top in 1900, that famous area of less than 250 acres has produced more than 235,000,000 barrels of oil.

New Canadian Pipe Line.—A new Canadian pipe line has recently been opened, this being the one laid down by the Canadian Transit Co. from Froomfield to the plant of the Canadian Oil Refinery Co. at Petrolea.

A New Refining Co.—The Mid-Continent Oil and Refining Co., of Augusta, Maine, with a capital stock of \$5,000,000 has been incorporated, mainly for the purpose of refining oil from the Kansas and Indian Territory fields.

Texas-Louisiana Production.—At the first of last month it was estimated that the Texas-Louisiana fields were producing about 50,000 barrels daily, and of this total no less than 20,000 barrels came from the Jennings field.

To Prospect in Iowa.—Mr. G. H. Johnson, of the Britton Oil Co., of Beaumont, Texas, has leased about 1,200 acres of territory in the Maquoketa, Iowa prospect district, and will early in the new year prepare to test the territory.

Operations at Humble.—There is much activity in the Humble field, and production is steadily increasing, being now estimated at 7,000 barrels daily. During the first half of November six wells were completed, five of which are producers.

Air Compressors at Jennings.—The President of the Heywood Oil Co. has recently cancelled pending orders for new air compressors, says the *Oil Investors' Journal*, because he believes there are already sufficient air compressors in the Jennings district to handle the output.

An Oil Man's Generosity.—Mr. John D. Noble of the Canadian Oil Fields Ltd., and the present Mayor of Petrolea, recently opened Petrolea's new park, announcing after the opening ceremony that he would present the town with a fountain, from a design made by himself.

In Saratoga.—Two good wells have been struck in the Saratoga field, each of which gave an initial production of over 1,000 barrels. The field is now yielding over 8,000 barrels daily, which is an increase when compared with the production at the corresponding period of the preceding month.

Californian Oil Land Deal.—An oil deal has recently been consummated in California, the Associated Oil Co. having purchased the property belonging to the Saur Dough Oil Co. The price paid for the acquired land has been \$10,000 per acre, there being in all thirty acres upon which are seven wells.

All Pirates.—A company under the name of the Pirate Petroleum Co. is said to be drilling a couple of wells somewhere in Texas. The only details to hand are that there may be some litigation in connection with the drilling of the wells, inasmuch as the land has not been properly secured. The company's title seems very appropriate.

Mid-Continent Oil Figures.—During the first fourteen days of August, the runs from the Mid-Continent fields were somewhat below the October average, but the shipments were almost a stand-off. The receipts exceeded the deliveries by over 12,000 barrels per day. In October the surplus stocks accumulated at the rate of 14,000 per day.

The Two Lines to the Gulf.—Two trunk pipe lines to the Gulf of Mexico from the Mid-Continental fields are to be laid with all possible speed. The interests identified with the J. M. Guffey Petroleum Co. and the Gulf Refining Co. are to build one line, while, as already announced in the *REVIEW*, another is to be laid by the Texas Co., the order for the pipe having been given.

Developments in Mexico.—The operations which are being carried out in Mexico by Messrs. Pearson and Son, of London, to which we referred in a recent issue, appear to be attracting considerable attention. A special correspondent in the *Oil Investors' Journal*, states that two prolific oil sands have been developed, the first being met with at about 160 feet, and the lower one at 900 feet.

MESSRS. JOHN M. THOM'S NEW CATALOGUES.

The issuing of new trade catalogues is perhaps not generally a matter of great significance in connection with those firms who especially cater for the needs of the petroleum industry, but in the case of Messrs. John M. Thom, of Canal Works, Patricroft, Manchester, it is full of meaning. Consequently it is not out of place here to briefly refer to this firm which has during the past few years laid itself out to effectively meet the wants of those engaged in the exploitation or the operation of petroleum fields all over the world.

The founder of the firm—Mr. John M. Thom—is one of the most well-known Government boring contractors in this country, and remembering that practical experience enters so largely into the design of plants and tools for boring for oil, it naturally follows that Mr. Thom's practical experience of a quarter of a century in boring for minerals throughout the world stands him in good stead in the eyes of those requiring serviceable plant for the oil fields. Mr. Thom's most recent success in drilling for oil has been in Barbados, where a number of experimental borings have been sunk. Oil was struck in the borings, and those gentlemen in charge of the enterprise look forward to the formation of an increasingly important industry in that remote part of the British empire.

Whether it be in connection with boring plant, pumps, air compressors, portable boilers, tubes for pipe lines, or well casing, Mr. Thom is prepared to immediately contract, while, if necessary, he can call up a miniature army of expert drillers at a few days' notice. As we have suggested, the issue of the new catalogues mark a twenty-five years' connection of Mr. J. M. Thom with, and practical experience in, the boring for minerals, and the book dealing with boring plants and pumps is particularly interesting. Here details are given of Thom's percussion boring plants for depths up to 3,000 feet; prospecting plants, pumps, casings, air compressors, etc., but the compressors themselves fill a bulky separate catalogue.

It will therefore be seen that this old-established firm, pays great attention to the needs of the petroleum industry, recognising as it does, its importance throughout the world. We need scarcely add that any of the catalogues will be forwarded upon application.

LIQUID FUEL ON RUSSIAN RAILWAYS.

At the liquid fuel conference recently held in St. Petersburg, it was suggested that the railways, which are the largest consumers of liquid fuel, might go over partly to coal, and thus solve the liquid fuel crisis. A correspondent in the *Trade and Industry Gazette* cites figures to prove that very little can be expected from this direction.

The official report on the working of the railways shews that in 1904 the liquid fuel burning State railways (Transcaucasian, Samara - Zlatoust, Moscow - Kursk, Nijni-Novgorod, Central Asian, Syzran-Viasma, Baltic, and Moscow-Brest lines) have consumed altogether 66,760,000 poods of liquid fuel. Since 1904, there has been added the Tashkent Railway, with an annual requirement of 5,500,000 poods of liquid fuel, so that even leaving out of account the normal increase in traffic on the railways, the requirements of liquid fuel by the State railways must now be not less than 72,260,000 poods per annum. For 1907, however, the official estimate of liquid fuel to be bought by the railways has been put down at 61,500,000 poods. A further reduction of 3,000,000 poods is expected on the Transcaucasian Railway, in consequence of the commencement of the working of the through Baku-Batoum pipe line. When considering the question of further reductions, it must be borne in mind that out of the above quantity of 58,500,000 poods, 50,000,000 poods are taken up by such railways as the Transcaucasian, Samara-Zlatoust, Nijni-Novgorod, Central Asian and Tashkent lines; where there is no other fuel to take the place of oil. The other 8,500,000 poods are taken up by such railways which use oil fuel only for their passenger traffic. Even in the case of the latter, the abandonment of oil fuel would be attended with great difficulties, as in order to maintain the present speed of trains, bigger locomotives would have to be built, which would take some time. It would also be necessary to establish a series of coal depôts. By that time the petroleum industry may return to normal conditions, and all this expenditure may prove fruitless.

The Baku-Batoum Pipe Line.—The through pipe line from Baku to Batoum was opened on November 28th. The pumping of oil along the whole line is now taking place, although some of the auxiliary works are not yet completed.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO DECEMBER 3rd, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Nov. 19.	From Jan. 1.	Since Nov. 19.	From Jan. 1.	Since Nov. 19.	From Jan. 1.	Since Nov. 19.	From Jan. 1.	Since Nov. 19.	From Jan. 1.	Since Nov. 19.	From Jan. 1.	Since Nov. 19.	From Jan. 1.	Since Nov. 19.	From Jan. 1.
Austria ...	—	2,118,640	—	394,930	8,000	95,930	—	—	—	—	—	—	—	—	8,000	2,620,500
Belgium ...	67,200	67,570	12,940	470,218	—	11,000	—	—	—	5,300	—	—	5,367	80,140	548,455	—
Canada ...	—	—	—	47,460	—	56,400	—	—	—	—	—	—	200	—	—	101,060
Dutch India:	—	480	—	960	—	192	—	—	1,600,600	14,170,230	—	1,693,010	—	1,920	1,600,600	15,866,792
Germany ...	1,252,920	7,651,300	33,330	1,315,723	—	—	—	—	—	2,380	—	—	200	17,162	1,286,450	8,987,645
Holland ...	—	10,180	250	3,610	—	9,440	—	—	37,950	1,486,623	—	271,000	7,440	90,680	47,640	1,579,253
Roumania ...	467,200	6,757,945	—	—	—	683,080	1,251,090	4,345,970	—	1,892,460	125,650	125,650	—	—	1,813,950	13,805,115
Russia ...	—	29,174,420	698,300	5,023,951	—	—	—	3,731,473	—	6,210	—	—	—	13,760	698,300	37,919,814
U.S.A. ...	3,361,170	88,424,255	4,065,140	39,817,141	—	670,968	1,903,160	42,379,858	—	7,490,120	—	9,072,430	31,940	1,824,284	9,361,410	189,868,966
Other Countries	—	1,655	1,510	34,452	—	—	—	—	—	4,130	—	3,840	—	217,550	1,510	261,627
	5,148,490	134,206,445	4,811,470	47,108,445	8,000	1,527,010	3,154,250	50,457,301	1,640,550	25,057,453	125,650	11,165,940	39,580	2,170,923	11,928,000	271,892,227

The American Oil Market.

New York, Week ended Nov. 17th.

Reports from the lower south-west oil fields are not encouraging. Fewer wells have been completed, and the fields are furnishing only light pumpers, and the total failures numbers a good volume. Similar conditions in the south-eastern part of Ohio fields are also noted. New work in nearly all the fields has been dropping off considerably during the past months. Operators are making preparations to curtail operations during the winter months, consequently a listless winter in all fields is looked for. The deep sand districts are supplying the larger percentage of small wells than the shallow territory. Considerable properties in the Illinois fields have changed hands recently. In the Mid-Continent fields the average of the producing wells shews a slight increase, says the *Oil, Paint and Drug Reporter*, and stocks shew no accumulation. Reports from Texas note a steady decrease in the production, which serves to hold prices firm. Advices from Beaumont note that an oil strike reputed to have been made on Boyou Lafourche, near the town of Labadieville, has been investigated, the extent of the strike is not known. Leases of lands in the vicinity have been secured, and it is believed that considerable wildcatting and prospecting will be the result. Quotations for Texas oil are: - Batson 52 to 60c., as to gravity; Humble, 65c.; Jennings, 58c.; Saratoga, 60c.; Spindle Top, 68c.; Sour Lake, 50 to 64c., as to gravity.

REFINED AND PRODUCTS.—There has been no perceptible change in the general conditions governing the trade and the market. The Russian prices have declined slightly. Work there continues without interruption and the position is satisfactory, but there is a feeling that fresh strikes may occur at any moment. Stocks at Batoum continue light and the quantity reaching Baku has been moderate. Navigation on the river Volga will be opened later this year. The engagements during the week aggregated over 215,000 barrels.

The price for barrelled oil for export remains unchanged, and the market is quoted at 7.50c. for New York loading, and 7.45c. for Philadelphia loading. The principal foreign markets report no changes. Freight rates are steady at 2s. 2d. @ 3s. od. hence to London, and 2s. 3d. @ 3s. od. to Continental ports, as to port and vessel. Home trade lots have been in good request and are firm on the basis of 10c. for 150 degrees water white from tanks, and 13c. in barrels.

Cases for export continue dull and no sales could be traced. The price of plain tops has been steady at 10c. Freight rates are firm.

Crude for export has been dull and no sales of importance have been reported. Pennsylvania crude closed at at 7.50c. in barrels. Cases for export have been quiet, and no sales have been reported.

Naphthas remain firm. For export, sales of 600 barrels have been reported.

CLOSING QUOTATIONS.

CRUDE.		Week ended	
		Nov. 10, 1906.	Nov. 17, 1906.
National Tran. Certificates	per bbl.	\$1.58 @ 1.59	\$1.58 @ 1.59
Pennsylvania crude in bbls.	per gal.	7.60	7.60
Pennsylvania crude in bulk	..	4.50	4.50
Residuum, bbls. for export	..	6 @ 6 1/2	6 @ 6 1/2

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Nov. 17, 1905.	Nov. 17, 1906.
Tiona	..	1.68	1.68
Pennsylvania	..	1.58	1.58
North Lima	..	0.94	0.90
South Lima	..	0.89	0.85
Indiana	..	0.89	0.85
CANADIAN OIL:			
Petrolia	..	1.34	1.30

REFINED—FOR EXPORT.

		Week ended	
		Nov. 10, 1906.	Nov. 17, 1906.
Cargo Lots for export	per gal.	7.50	7.50
In bulk	..	4.40	4.40
Philadelphia loading	..	7.45	7.45

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Nov. 10, 1906.	Nov. 17, 1906.
3,000 to 10,000	..	10.05	10.15
1,000 to 3,000	..	10.20	10.20

REFINED—JOBGING LOTS.

		Week ended	
		Nov. 10, 1906.	Nov. 17, 1906.
120 fire test, S.W.	per gal.	12	12
130 fire test, S.W.	..	12 1/2	12 1/2
150 fire test, W.W.	..	13	13
In bulk from tanks	..	10	10
300 fire test	..	12 1/2 @ 13 1/2	12 1/2 @ 13 1/2

NAPHTHA AND GASOLENE.

		Week ended	
		Nov. 10, 1906.	Nov. 17, 1906.
Naphtha, crude, car. lots, 68 @ 72 deg.	..	15.00	15.00
Gasolene, 86 deg.	..	23.00	23.00

PENNSYLVANIAN OIL RUNS from Nov. 9th to Nov. 15th were:—Nov. 9th, 103,739; Nov. 10th and 11th, 190,212; Nov. 12th, 112,359; Nov. 13th, 100,957; Nov. 14th, 116,470; and Nov. 15th, 117,068. For the month of September, 3,110,306.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—160,501; 296,991; 144,167; 127,808; 213,636; 84,944. For the month of Sept., 4,506,448.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended November 16th and from Jan. 1st, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	403,500	10,908,500	11,192,800
Refined, cases	160,000	12,039,100	18,184,000
Crude, barrels and bulk	33,200	1,431,800	1,194,900
Crude, cases	—	325,000	199,000
Naphtha, barrels	800	277,300	507,600
Residuum, barrels	—	646,900	670,500
Lubricating, barrels	17,300	235,500	192,300
Total, barrels cde. eq.	722,381	22,001,500	24,037,481

CLEARANCES FOR THE WEEK.

During the week ended Nov. 16th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	13,975,470	409,406,684	440,226,191
Crude	3,000	235,000	931,594
Naphtha	232,100	14,640,834	11,406,773
Residuum	—	4,249,600	3,294,515

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Nov. 16th	18,633,290
Total from New York, rom Jan. 1st, 1906	546,835,614
Same period last year	588,499,851
Decrease	41,664,237
From United States, week ended Nov. 16th	25,787,301
Total from United States, since Jan. 1, 1906	1,063,278,709
Same period last year	1,117,291,891
Decrease	54,013,182

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The "Review" Shipping List.

DECEMBER 6, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From	For.	Latest Date and Position.
ALICE ISABELLE.	Sables d'Olonne	Philadelphia	L. Nov. 11	JOANNIS COUTZIS	Taganrog ..	Piræus	L. Nov. 23
ALCHYMIST	London	Portsmouth	L. Dec. 2	J. B. AUG. KESSLER	Philadelphia	Hong Kong. .	Arr. Singapore, Nov. 19
AMERICAN	New York ..	San Francisco	Arr. Nov. 11	JAMES BRAND	Pauillac and Barry	Philadelphia	Arr. Nov. 24
APPALACHEE	San Francisco	Tientsin	L. Oct. 28	KURA	New York ..	Foynes	L. Nov. 26
APSCHERON	Barcelona ..	Batoum	Arr. Dec. 2	LA CAMPINE	Antwerp	Philadelphia	L. Nov. 25
ARAL	Tyne	Philadelphia	Arr. Dec. 4	LA FLANDRE	New York ..	Ghent	Arr. Nov. 27
ARAS	Tyne	New York ..	Arr. Nov. 28	LA HESBAYE	Philadelphia	Antwerp	Arr. Nov. 30
ARGYLL	Astoria	Port Harford	L. Nov. 16	LA MADELEINE ..	St. Louis (Rhône)	Antwerp	Arr. Dec. 2
ASTRAKHAN	Hamburg ..	Tyne	Arr. Dec. 5	LA VIGUESA	Vigo	Philadelphia	L. Oct. 11
AUGUST KORFF ..	Manchester	Philadelphia	L. Dec. 5	LACKAWANNA	Messina	New York ..	Arr. Nov. 29
AUREOLE	Tyne	Philadelphia	Arr. Nov. 28	LE COQ	Havre	Philadelphia	P. Lizard, Nov. 23
AZOV	—	—	Trading on W.C. of South Amca.	LOUTSCH	—	—	Tr. btwn. Odessa & Novorossisk
BAKU STANDARD	Ibrail	Rouen	Arr. Dec. 1	LUCERNA	Philadelphia	Copenhagen	L. Dec. 1
BALAKANI	Cardiff	Philadelphia	Arr. Dec. 5	LUCIFER	Philadelphia	Venice	P. Del. Break., Nov. 23
BATOU	Philadelphia	Rouen	Arr. Dec. 3	LUCIGEN	Tyne	Batou n ..	L. Constant'ple, Nov. 30
BAYONNE	Hull	Tyne	Arr. Nov. 23	LUCILINE	Philadelphia	Dunkirk	Arr. Nov. 30
BEACON LIGHT ..	Batoum	Hamburg ..	P. Constant'ple, Dec. 3	LUMEN	Cette	Batoum	L. Nov. 27
BEME	Rangoon	Bombay	L. Nov. 13	LUX	Novorossisk	Bordeaux ..	L. Constant'ple
BLOOMFIELD	Philadelphia	Hamburg ..	Arr. Dec. 3	MAKKA VEI	—	—	Trading in Black Sea
BORJOM	Batoum	Alexandria..	L. Constant'ple, Nov. 24	MANHATTAN	New York ..	Savona	Arr. Nov. 28
BRILLIANT	Landsrona..	Hamburg ..	Arr. Nov. 24	MANNHEIM	New York ..	Stettin	Arr. Dec. 2
BROADMAYNE	Liverpool ..	Port Arthur (Texas)	Arr. Nov. 21	MARGARETHA ..	Antwerp	Port Arthur (Texas)	L. Nov. 5
BULLMOUTH	Balekappan	—	L. Shanghai, Dec. 1	MEXICAN PRINCE	Port Arthur (Texas)	Cette	Arr. Dec. 3
BULYSES	Cardiff	Borneo	P. Oitavos, Nov. 29	MIRA	Batoum	Manchester	L. Nov. 29
BURGERMEISTER	Tyne	Philadelphia	P. Dunnet Head, Nov. 20	MUREX	Palembang..	Singapore ..	Arr. Dec. 2
PETERSEN	—	—	—	NARRAGANSETT..	London	New York ..	L. Dec. 5
CADAGUA	Kustendje ..	London	Arr. Nov. 20	NERITE	—	—	Tr. in China Seas
CALCUTTA	San Francisco	Shanghai ..	Arr. Nov. 15	NEW YORK	Southampton	New York ..	Sig'd Browhead, Dec. 2
CARDIUM	Balekappan	—	L. Oct. 31	OCEAN	Philadelphia	Antwerp	Arr. Dec. 4
CAUCASIAN	Philadelphia	London	Arr. Dec. 6	OILFIELD	Tyne	Philadelphia	P. Dunnet Head, Nov. 25
CHARLOIS	Amsterdam	New York ..	Arr. Nov. 17	ORANJE PRINCE..	Tyne	New York ..	P. Prawle, Nov. 10
CHESAPEAKE	New York ..	Savona and Messina	Arr. Savona, Nov. 30	ORIFLAMME	Cette	Philadelphia	L. Nov. 22
CHESTER	New York ..	Antwerp	Arr. Dec. 5	OSCEOLA	Liverpool ..	Clyde	Arr. Dec. 3
CIRCASIAN	—	—	Trading on W.C. of South Amca.	OTTAWA	Vera Cruz ..	Philadelphia	Arr. Nov. 23
PRINCE	—	—	—	OURAL	Port Arthur (Texas)	Antwerp	Arr. Nov. 25
CLAM	Palembang..	Balekappan	Arr. Nov. 27	PALEMBANG	—	—	Tr. Sts. Settlements & China Seas
COWRIE	Rotterdam ..	Cardiff	Arr. Dec. 3	PAULA	Stettin	Philadelphia	L. Tyne, Dec. 3
CYMBELINE	Philadelphia	Rouen	L. Nov. 27	PECTAN	Amsterdam	Tyne	Arr. Dec. 3
CZAR NICOLAI II.	Hamburg ..	Batoum	L. Dec. 2	PENNOIL	Philadelphia	Rotterdam ..	Arr. Dec. 2
DAGHESTAN	Thameshaven	Dunkirk	Arr. Dec. 2	PERLAK	Madras	Aroe Bay ..	L. Nov. 7
DAKOTAH	San Francisco	Hong Kong..	Arr. Nov. 7	PHOEBUS	Hamburg ..	New York ..	L. Tyne, Dec. 25
DELAWARE	Manchester	New York ..	Arr. Nov. 28	PINNA	London	Philadelphia	P. Scilly, Nov. 19
DEUTSCHLAND ..	Tyne	New York ..	Arr. Dec. 1	POTOMAC	Sunderland	New York ..	Arr. Nov. 28
DIAMANT	New York ..	Copenhagen	L. Nov. 21	PROMETHEUS	New York ..	Rotterdam ..	L. Nov. 25
ELAX	New York ..	—	L. Dec. 1	PRUDENTIA	Pensacola ..	London	Arr. Dec. 4
ELISE MARIE	Gothenburg	New York ..	In Tyne, Nov. 18	QUEVILLY	Rouen	Philadelphia	L. Nov. 23
ENERGIE	Pillau and Tyne	Philadelphia	P. Dunnet Head, Nov. 21	RION	Ibrail	Gibraltar ..	L. Constant'ple, Nov. 26
ERIVAN	Tyne	Batoum	P. Dover, Nov. 30	ROCK LIGHT	London	Kustendje ..	P. Oitavos, Nov. 28
EUPLECTELA	Kustendje ..	Dover	Arr. Malta, Dec. 1	ROSSIJA	Archangel ..	Honfleur....	Arr. Nov. 29
EXCELSIOR	Novorossisk	Nordeuhamn	Arr. Bremerhaven, Nov. 30	ROTTERDAM	Antwerp	New York ..	Arr. Nov. 25
EZIO	—	—	Coasting Peru	RUSSIAN PRINCE	Batoum	Antwerp	L. Constant'ple, Nov. 30
FRANCE MARIE ..	Marseilles ..	Philadelphia	L. Dec. 3	SALAHADJI	—	—	Tr. Sts. Settlements and Java Seas
GEESTEMUNDE ..	Philadelphia	Danzig	P. Del. Break, Nov. 23	SAXOLEINE	Blyth	Philadelphia	Arr. Nov. 18
GENESSE	Tyne	Philadelphia	Arr. St. Johns (N.F.), Nov. 25	SEMINOLE	San Francisco	Calcutta	Arr. Nov. 8
GEORGIAN	London	Tyne	Arr. Dec. 5	SILVERLIP	Cardiff	Port Arthur (Texas)	Arr. Nov. 28
GOLDMOUTH	Cardiff	Aroe Bay ..	Arr. Port Said, Nov. 25	SINGU	—	—	Tr. in East Indies
GUT HEIL	Philadelphia	Konigsberg..	L. Nov. 25	SNOWFLAKE	Philadelphia	Cette	Arr. Nov. 25
HAINAUT	Smyrna	Antwerp	Arr. Nov. 25	SOPHIE	Tunis	Kustendje ..	L. Nov. 30
HARRY	Swansea	Philadelphia	P. Mumbles, Dec. 4	SPONDILUS	Singapore ..	Balekappan	Arr. Nov. 19
WADSWORTH	—	—	—	—	—	—	—
HELIOS	Bremerhaven	Philadelphia	P. Dunnet Head, Nov. 28	—	—	—	—
HOTHAM	Hamburg ..	Middlesbro'	L. Cuxhaven, Dec. 5	—	—	—	—
NEWTON	—	—	—	—	—	—	—
HOUSATONIC	Bombay	Kurrachee ..	L. Nov. 13	—	—	—	—
IMPERIAL	—	—	Tr. on Lakes btn. U.S. and Can.	—	—	—	—

Vessel.	From.	For.	Latest Date and Position.
STANDARD	Stockholm ..	—	P. Dunnet Head, Dec. 5
STROMBUS	Singapore ..	—	L. Oct. 24
SURAM	Newport	New York ..	P. Barry Island Dec. 1
SUWANEE	London	Kustendje ..	P. Oitavos, Dec. 4
SVIET	Batoum	Alexandria ..	Arr. Nov. 27
TELENA	Cardiff	Malta	P. Oitavos, Dec. 4
TEREK	Savona	Novorossisk	Off Forte Spuria, Dec. 1
TIFLIS	Batoum	Rouen	P. Constant'ple, Dec. 1
TIOGA	Philadelphia	Liverpool ..	L. Nov. 22
TONAWANDA	San Francisco	Canton	Arr. Hong Kong, Dec. 1
TROCAS	—	—	Arr. Singapore, Nov. 8
TURBO	Cardiff	Philadelphia	Arr. Nov. 22
TUSCARORA	Yokohama ..	San Francisco	Arr. Nov. 20
TWINGONE	Rangoon ..	Madras	L. Nov. 28
VEDRA	New York ..	Avonmouth	Arr. Dec. 3
VILLE DE DIEPPE	—	—	In Port Havre, Nov. 28
VILLE DE DOUAI	Campana ..	Philadelphia	Arr. Nov. 22
VOLUTE	Shanghai ..	Balekpappan	Arr. Dec. 3
WEEHAWKEN	Belfast	Philadelphia	Arr. Nov. 27
WILLKOMMEN ..	Philadelphia	Copenhagen	P. Del. Break, Nov. 18
WINNEBAGO	San Francisco	Itosaki	L. Nov. 21

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

December 7th, 1906.

There are no changes to report in refined petroleum, prices remaining for Russian and Roumanian, 5 $\frac{7}{8}$ d.; American 6 $\frac{1}{4}$ d.; Water White, 7 $\frac{1}{4}$ d.

LUBRICATING OILS

are unchanged as follows:—

American pale, £7 to £9 10s.

American dark cylinder, from £7 2s. 6d.

American filtered cylinder, from £11.

No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine is dull and lower in price, being quoted for Spot 48s. 9d., and for the first four months of next year 50s. 3d.

LIVERPOOL OIL MARKET.

December 7th.

Refined oils are quiet, and sellers now quote 5 $\frac{7}{8}$ d. for Russian, Galician or Roumanian; and 6 $\frac{3}{8}$ d. to 7 $\frac{7}{8}$ d. per gallon for American.

PETROLEUM SPIRIT continues at 9d. to 10d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, December 7th.

Refined, in cases, is lower at 10'00; Standard White, 7'50; Credit balances, 1'58c.

PHILADELPHIA, December 7th.

Standard White is still quoted at 7'45.

RUSSIA.

BAKU, December 3rd.

The Baku oil market is firm. Light crude oil, spot, 21 $\frac{3}{4}$ copecs per pood, future delivery 22 copecs; heavy crude, future delivery 22 $\frac{3}{8}$ copecs; kerosene, in waggons 26 copecs; in ships, 26 copecs.

BELGIUM.

ANTWERP, November 30th.

The petroleum market is unchanged. Price of Standard White, spot, 19 $\frac{1}{2}$ francs per 100 kilos.; December, 19 $\frac{3}{4}$ francs; first three months 1907, 20 francs.

FRANCE.

PARIS, November 30th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 25'25 francs per hectolitre. Special white oil, 29 francs per hectolitre.

GERMANY.

HAMBURG, November 30th.

The kerosene market is firm. The price of American Standard White is 6'80 marks per 50 kilos, Russian, 6'55 marks.

ROUMANIA.

December 3rd.

Francs.

Crude oil from different fields, including pipe line charges, per 100 kgs. ... 4'30-4'40

Refined oil, exclusive of taxes ... 13'00- —

Motor benzine, including taxes ... 16'00-18'00

Benzine, doubly refined ... 24'00-25'00

Residuals in tank waggons, at refinery ... 3'20-3'30

Paraffin ... 120'00-125'00

Lubricating Oils —

Agricultural... 30-32

Prime ... 35-37

Extra ... 40-42

Royal ... 45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilo

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs. 8'50- —

Benzine, sp. gr. 0'710-0'715 ... 15'50-16'50

„ sp. gr. 0'720-0'725 ... 14'50-15'59

„ sp. gr. 0'730-0'740 ... 11'50-12'50

„ sp. gr. 0'745-0'755 ... 7'50- 8'50

INDIA.

BOMBAY, November 13th.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. .. Rs. 6 0 2

„ Chester, 125 deg. .. 4 8 2

„ Monkey Brand, 125 deg. .. 4 2 2

„ Bulk, 125 deg. (in local made tins) .. 3 10 0

„ „ 125 deg. (8 Imperial gallons) .. 3 0 0

„ "White Camelia" brand, 125 deg. .. No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair .. 3 2 0

Borneo oils, in tins, per pair .. 3 2 0

Sumatra "Rising Sun," bulk, per unit .. 3 0 0

„ „ tins, per pair .. 3 10 0

Silverlight cases, per case .. 4 8 0

Russian, "Anchor," cases .. 4 14 0

GREAT WESTERN RAILWAY.

THE DIRECTORS OF THIS COMPANY are prepared to receive TENDERS for the purchase of EMPTY CASKS AND BARRELS during the year 1907.

Forms of Tender (upon which alone Tenders will be received) may be obtained on application to the undersigned, by whom Tenders, marked outside "Tender for Empty Casks and Barrels," will be received on or before Tuesday, the 11th December.

The Directors do not bind themselves to accept the highest or any Tender.

G. K. MILLS, Secy.

Paddington Station, London, 21st November, 1906.

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for .
this Journal by . . .
the Custom House. .*

FOR THE WEEK ENDED NOVEMBER 26TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Nov.	LONDON—			
20	General Petroleum Co. (Petrolea)	Lamp	70,000	Hamburg
20	London & India Docks Co..	Lub.	2,150	"
20	Anglo-American Oil Co. ..	"	48,600	Philadel.
20	H. and G. Dutfeld ..	"	280	"
20	General Petroleum Co. (Cadagua)	Gas	35,000	Kustendje
21	A. Brown and Co. ..	Lub.	1,000	Hamburg
21	G. W. Sheldon and Co. ..	"	200	Antwerp
22	" ..	"	320	"
22	London and India Dock Co.	"	360	Hamburg
22	Asiatic Petroleum Co. (Cowrie)	Spirit	732,600	Pulo Samboe
22	Union Lighterage Co. ..	Refined	2,700	Philadel.
23	Fielder, Hickman and Co...	Lub.	2,400	New York
23	General Petroleum Co. (Cadagua)	Gas	473,170	Kustendje
23	Anglo-American Oil Co. (Suwanee)	Lamp	467,200	"
23	" ..	Fuel	125,660	"
23	" ..	Spirit	420,920	"
24	Scott's Wharf ..	Lub.	3,000	New York
26	G. W. Sheldon and Co. ..	"	930	"
	LIVERPOOL—			
22	Penwarden and Jackson ..	L.Comp.	210	Antwerp
22	Liverpool Warehousing Co.	Lub.	7,250	Galveston
22	Worthington and Boler ..	"	2,200	Philadel.
22	Geo. B. Taylor ..	"	44,800	"
22	W. B. Dick and Co... ..	"	16,110	"
22	American Line ..	"	2,160	"
23	Crew, Levick and Co. ..	"	1,110	"
23	Bowring Petroleum Co. ..	"	800	"
23	Meade-King, Robinson & Co.	"	23,580	"
24	George B. Taylor ..	"	840	New York
24	Vacuum Oil Co. ..	"	14,360	"
26	Valvoline Oil Co. ..	"	11,890	"
26	Burnaby and Chantrell ..	L.Comp	840	"
26	Cunard Steamship Co. ..	Lub	2,200	"
26	Pickfords ..	"	190	Hamburg
26	Meade-King, Robinson & Co.	"	12,480	"
26	J. T. Fletcher and Co. ..	"	120	Antwerp
	BARROW—			
20	Asiatic Petroleum Co. (Telena)	Spirit	868,000	Pulo Samboe
	BRISTOL—			
20	H. R. James and Sons ..	Lub.	6,800	New York
20	W. Smith and Co. ..	"	27,560	"
24	Pickford's, Ltd. ..	"	450	Hamturg
	GOOLE—			
20	Goole Steam Shipping Co...	"	600	Antwerp
	GRIMSBY—			
23	J. Sutcliffe and Son ..	"	1,660	"

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Nov.	HULL—			
20	Anglo-American Oil Co. (Bayonne)	Lamp	1,014,340	New York
20	" ..	Gas	123,540	"
20	Helmsing and Co. ..	Lub.	4,000	Riga
23	Wilsons and N.E. Railway Shipping Co. ..	"	1,400	Antwerp
	MANCHESTER—			
20	D. Currie and Co. ..	"	240	Hamburg
20	J. T. Fletcher and Co. ..	"	120	Antwerp
20	Worthington and Boler ..	"	2,950	Philadel.
30	George B. Taylor ..	"	139,800	"
20	Crew, Levick and Co. ..	"	25,390	"
22	Meade-King, Robinson & Co.	"	56,000	"
22	" ..	M.Colza	7,200	"
23	Henry Wells Oil Co. ..	Lub.	1,920	"
23	Lamport and Holt ..	"	3,990	New York
	NEWCASTLE—			
20	Furness, Withy and Co. ..	"	5,080	"
22	C. Hassell and Son ..	"	142,800	"
22	P. H. Matthiessen and Co...	"	100	Bergen
22	Tyne-Tees Steamship Co. ..	"	400	Hamburg
24	" ..	"	6,960	Antwerp
	ABERDEEN—			
20	R. Cannon, Reid and Co. ..	"	200	Hamburg
	DUNDEE—			
23	A. B. Fleming and Co. ..	"	2,050	Riga
	GLASGOW—			
20	Burrell and Son ..	Resid.	8,000	Trieste
20	Clyde Shipping Co... ..	Lub.	250	Antwerp
20	Anchor Line ..	"	79,960	New York
20	" ..	Lub.Gr.	1,200	"
	GRANGEMOUTH—			
20	J. Currie and Co. ..	Lub.	1,720	Hamburg
23	" ..	"	80	"
23	W. Graham-Yooll and Co.	Lamp	2,000	"
	LEITH—			
20	W. Graham-Yooll and Co...	"	4,360	"
22	" ..	"	2,180	"
22	J. Currie and Co. ..	Lub.	840	"
22	Henderson and McIntosh ..	"	41,400	New York
	BELFAST—			
20	Consolidated Petroleum Co. (Suram)	Lamp	1,251,000	"
	Total for Week ..	"	6,686,170	
	Deduct to Correct—			
	LONDON—			
9	Asiatic Petroleum Co. (Telena)	Benzine	924,900	Pulo Samboe

MIDLAND RY-CARRIAGE & WAGON CO., LTD.,



**Midland Works,
BIRMINGHAM.**

**BUILDERS OF
OIL & OTHER
TANK WAGONS,
And Every Description
of Rolling Stock
WITH WOOD OR STEEL
UNDERFRAMES.**

Anglo-American Oil Co., Ltd.,

SOLE IMPORTER

Finest American Lamp Oils

WHITE ROSE



. and .



ROYAL DAYLIGHT.

Pratt's Motor Spirit

PACKED IN SEALED TWO GALLON CANS.

Universally used by all leading Motor
Manufacturers, Motorists, Railway and
Motor Bus Companies.



IN USE AND FOR SALE EVERYWHERE.

— QUALITY TELLS. —

To Dealers only.

FOR THE WEEK ENDING DECEMBER 3RD, 1906—

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Nov. LONDON—				
27	Fielder, Hickman and Co...	Lub.	1,680	New York
27	Anglo-American Oil Co. ..	"	57,200	"
27	Scott's Wharf	"	2,000	"
27	R. Hayne	"	160	"
27	A. Brown and Co. ..	"	2,400	Philadel.
27	J. Harrison, Ltd. ..	"	610	Treport
28	London and India Docks Co.	"	2,230	Hamburg
28	Humphrey and Co...	"	5,230	New York
29	J. Spurling	"	280	"
29	G. and H. Green ..	"	3,300	"
29	Anglo-American Oil Co. (Narragansett)	"	2,718,500	"
29	"	Lamp	268,200	"
29	Mordaunt Bros.	Lub.	10,900	Philadel.
29	Consolidated Petroleum Co. (Georgian Prince)	Lamp	1,168,020	Hamburg
29	T. H. Lee	Lub.	170	"
29	Lon. and Thames Haven Oil Wharves (Daghestan)	"	692,250	Batoum
29	J. Harrison	"	800	Treport
29	G. W. Sheldon and Co. ..	"	120	Antwerp
30	General Steam Nav. Co. ..	"	200	"
30	General Petroleum Co. (Petrolea)	Lamp	67,200	"
30	Tingle, Jacobs and Co. ..	Lub.	510	Philadel.
Dec.				
1	Anglo-American Oil Co. ..	"	32,000	"
1	Consolidated Petroleum Co. (Caucasian)	Gas	1,598,340	"
1	A. Brown and Co.	Lub.	2,000	Hamburg
3	London and India Dock Co.	"	1,290	"
3	Fielder, Hickman and Co...	"	2,400	Stettin
3	G. W. Sheldon and Co. ..	"	680	New York
3	Scott's Wharf	"	6,000	"
3	London and Thames Haven Oil Co.	"	4,800	"
3	A. Brown and Co.	"	2,400	Philadel.
Nov. LIVERPOOL—				
27	Meade-King, Robinson & Co.	Spirit	39,950	Rotterdam
27	"	Lub.	2,400	Philadel.
27	Geo. B. Taylor	"	76,000	"
27	Crew, Levick and Co. ..	M. Colza	14,740	"
27	Anglo-American Oil Co. (August Korff)	Lamp	822,880	Philadel.
29	"	Gas	181,280	"
29	Meade-King, Robinson & Co.	Lub.	41,000	Baltimore
29	W. B. Dick and Co. ..	"	12,440	"
29	"	"	16,420	New York
29	Ismay, Imrie and Co. ..	"	37,440	"
29	Geo. B. Taylor	"	50,360	"
29	"	"	5,280	"
29	Liverpool Storage Co. ..	Lub. Gr.	32,000	"
29	"	M. Colza	10,000	"
Dec.				
3	"	Lub.	11,960	"
3	"	"	2,360	"

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
3	Valvoline Oil Co. ..	Lub.	410	New York
3	W. Gibson and Son..	Lamp	2,050	Boston
Nov. BRISTOL—				
28	Anglo-Bosphorous Oil Co...	Lub.	800	Hamburg
29	W. Smith and Co. ..	"	15,000	New York
Dec.				
3	Anglo-Bosphorus Oil Co. ..	"	1,000	Hamburg
Nov. GRIMSBY—				
29	J. Sutcliffe and Son	"	190	"
HULL—				
27	Wilsons and N.E. Railway Shipping Co.	"	120	Antwerp
27	"	"	120	"
27	Hull and Neths. S.S. Co. ..	Tar Oil	5,040	Rotterdam
27	"	"	2,400	"
MANCHESTER—				
28	J. T. Fletcher and Co. ..	Lub.	120	Antwerp
29	Wilson, Sons and Co. ..	"	250	Rotterdam
29	G. B. Taylor	"	118,660	New York
29	Bramwell, Fern and Co. ..	"	2,840	"
Dec.				
3	"	"	1,660	"
3	Liverpool Storage Co. ..	"	7,720	"
Nov. NEWCASTLE—				
29	Tyne-Tees Steamship Co ..	"	640	Hamburg
PLYMOUTH—				
29	T. Nicolson and Co. ..	"	120	"
SWANSEA—				
29	Richards, Turpin and Co...	"	2,200	New York
DUNDEE—				
28	D. Alexander and Sons ..	Crude	200	Hamburg
GLASGOW—				
27	Anchor Line	Lub.	34,410	New York
27	J. and A. Allan	"	24,640	Philadel.
GRANGEMOUTH—				
27	J. Currie and Co.	"	780	Hamburg
29	W. Graham-Yooll and Co.	Lamp	2,000	"
LEITH—				
27	W. Graham-Yooll and Co...	"	2,180	"
27	J. Currie and Co.	Lub.	1,600	"
27	W. Graham-Yooll and Co...	Lamp	2,180	"
17	Henderson and McIntosh ..	Lub.	4,000	Philadel.
27	G. Gibson and Co.	"	240	Antwerp
28	"	"	180	"
Total for the Week			8,241,830	
Total for the past Fortnight			14,928,000	

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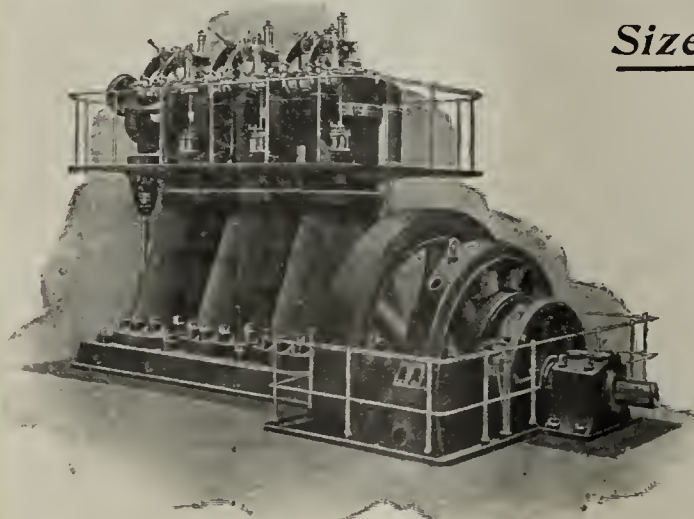
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The Petroleum Review.

By PAUL DVORKOVITZ.

Vol. XV. (New Series.)

DECEMBER 22ND, 1906.

No. 388.

Editorial Notes.

A Merry Christmas.

To our readers at home and abroad we extend with all sincerity the old wish—
“A Merry Christmas and a Happy New Year.”

The sentiments above expressed to our readers in all parts of the world suggest the arrival of a period which marks the passing of the year. We have no intention here of entering into a prophecy of what 1907 has in store, nor do we desire to chronicle the chief events which will stand out when 1906 is numbered in history. We would say, however, that the signs of increased prosperity which were seen when this year made its *debut*, have materialised during its run, and the petroleum industry as a whole is certainly in a far better condition than it was a year ago. Thus it follows that the outlook for the future is extremely bright, and we have reason to believe that the coming year will rank as a most successful one in oil history. Developments we are to-day witnessing on every hand both in regard to the production of petroleum and its numberless applications, and the writer who hit upon the expression that the world now runs in oil would appear to be somewhat of a prophetic turn of mind. At all events, the coming year opens with evidences which should infuse feelings of optimism in all who have a direct interest in the petroleum industry.

Of late we have heard much of America's petroleum export trade and of the decline brought about by the continued agitation against the corporation which has done so much for the extension of the foreign markets for American products. But we doubt if the majority of those who have perused the various articles upon the subject have dived much below the surface to study the plain facts. It is estimated that at the present time American petroleum fields are producing in the direction of 400,000 barrels of crude oil daily. A considerable portion of the total production is consumed at home either as fuel oil or in the shape of manufactured products, but according to those on the spot, this quantity cannot at the outside be placed at more than 150,000 barrels daily, so that the larger portion of the production is utterly beyond the power of America to

consume at all, and therefore must find an outlet upon the foreign markets. In times past the foreign trade has taken about 55 per cent. of America's manufactured petroleum, and it is now apparent that in spite of the greatly extended field for consumption at home, the increased yield of the new territories has more than been sufficient to cover this, so that to-day America's petroleum export trade is of greater importance than ever.

In view of this it is very surprising to find that, acting in diametric opposition to the policy of other Governments, that of the United States should go so deliberately out of its way to attempt to ruin the country's export trade in petroleum products. A circular which we give upon other pages of this issue, goes briefly though thoroughly into the attitude that has been taken up by other Governments in order to promote the interests of America's most powerful rivals in the oil trade, and, as Mr. Libby tritely remarks, the Standard Oil Co. is fairly entitled to the encouragement that other Governments are giving to similar business interests.

A movement of the greatest importance to Roumania is discernible in connection with the recently announced forthcoming increase in the capital of the Steaua Romana, for we gather that this fresh capital of 6,000,000 francs will be subscribed by the Rothschild firm of Paris. The appearance of the Rothschilds in the Roumanian petroleum industry is, as we say, an event of great importance to that country, being evidently part of the recent consolidation of interests of the European petroleum producers, which has resulted in the formation of the European Petroleum Union. Mr. Fergl, general manager for Messrs. Rothschild in Baku, together with Mr. Gouchman, the manager of their refineries, has visited Roumania on behalf of the firm and inspected the properties and installations of the Steaua Romana. Mr. Fiegl only stopped for a few days, but Mr. Gouchman remained for several weeks. One of the results of this fresh development will be that the Steaua Romana shares will now be quoted on the Paris Bourse. The total amount of capital invested in the Steaua Romana, including the 16,000,000 francs' worth of debentures, will be 46,000,000 francs.

Though considerable amount of stagnation was noticeable throughout the American fields in November and in the Pennsylvanian and other Eastern fields the completed wells were 200 less than for the previous month, the new production shewed an increase. This was as a result of the gusher strikes in the wilds of Oklahoma, which yielded nearly 50 per cent. of the new production, while Illinois, the leading State for new wells in October, came in for a

remaining 34 per cent. As shewing the remarkably poor territory now being drilled in Pennsylvania, though 346 wells were completed during the month the production from these was only 1,182 barrels, while Oklahoma with its 96 new wells furnished new production to the extent of 14,490 barrels. Illinois completed 376 new wells, and the new production from these was a little over 10,000 barrels, 64 of the wells being dry. Speaking of dry holes, the greatest number were encountered in the Pennsylvanian regions, where of the 346 completed wells no less than 75 were dry. In the Mid-Continent fields there was a fair amount of activity during the month and consequent upon the pipe line projects for taking care of the surplus oil, there was not that closing down of operations one is so accustomed to see at the commencement of winter. Full details will be found on another page of this issue.

We are informed that Mr. Leslie **Mr. Urquhart and Baku.** Urquhart has now relinquished his connection with Baku, without doubt a very wise step, when all the circumstances are considered. With this decision on the part of Mr. Urquhart, it is to be hoped that the system of co-management of competitive oil companies will be entirely abolished. In the past we have, at times, had some hard things to say with reference to this unbusiness-like and certainly unprofitable system of managing oil properties, and frequently we have perforce had to refer to Mr. Urquhart in this connection. But it has always been our aim to attack the principle and not the man, for in the person of Mr. Urquhart we have ever recognised a personal friend—a gentleman in every sense of the word. We certainly do hope that the companies which have all been under the management of Mr. Leslie Urquhart in Baku, will now see the advisability of placing themselves upon a sound footing by each having a capable and exclusive manager, whose only interest shall be in the one company for which he is responsible.

The 40—50 horse-power, six cylinder Rolls-Royce is being shewn at the exhibition at the Grand Palais, Paris, on the stand of the Paris Agents of C. S. Rolls and Co., viz., MM. A. de Massol and Co.

THE "REVIEW" SUMMARY.

News in a Nutshell.

MESSRS. HENRY FUNCK and Co., late of 22, Billiter Street, London, E.C., write to the effect that they have now removed to 101, Leadenhall Street, E.C., their telephone numbers now being 2682 Central and 1222 Avenue.

WE are requested to call attention to the fact that the Sterne-Sonneborne Oil Co., of 57, Gracechurch Street, E.C., are removing their offices to more convenient premises at the Royal London House, 16, Finsbury Square, E.C., and letters should be sent to this latter-mentioned address on and after January 1st next.

THE will of the late Sir Richard Tangye, Chairman of Tangye's, Ltd., has been proved at £226,300. The late gentleman bequeathed various legacies to his employees.

A RECORD has been established in the production of oil in the Roumanian fields. For October the total yield was about 80,000 tons—an unprecedented figure.

THE annual meeting of the Baku Petroleum Producers' Association is now in progress. A very long programme is being gone through.

RUSSIAN benzine is again figuring in the petroleum imports to this country. For the past fortnight 1,000 gallons has been landed, bringing the total this year up to about 7,000 gallons.

THE Baku Russian Petroleum Co., Ltd., is appealing for a second debenture issue which is being offered to shareholders at 90 per cent.

THE strike of workmen in the Russian oil fields is at an end, work having been resumed. No information is to hand as how far the demands of the men were met.

THE oil tanker "Cowrie" has met with disaster. A few days ago she was in collision with a British vessel named Reading, and sustained serious damage to her port bows which was stove in. She put in at Lisbon, where some of her tanks had to be emptied to enable the vessel to be docked for repairs.

THE pipe line project to the Mid-Continent fields of America has caused operators to continue prospecting instead of closing down for the winter season as is generally the case.

AN important circular from Mr. Libby, of the Standard Oil Co., referring to the attitude of other Governments to the powerful rivals of the Standard is found elsewhere in this issue. This shews that while foreign Governments are doing all they can to assist such corporations, the American Government seems bent upon doing all the injury possible.

DETAILS OF BAKU PRODUCTION AND BORING IN SEPTEMBER, 1906.

The latest issue of the *Neftiannoie Dielo* contains the following details of the production of crude oil at the Baku oil fields in September:—

						PRODUCTION (in poods).				Average per Well per Day.			
						By Baling.	By Spouters.	Casual.	Total.				
						Number of Wells in Exploitation.							
Balakhany	..	..	..	..	..	637	6,155,870	—	659	6,156,529	334
Saboontchi	..	..	..	..	..	581	14,148,621	91,600	283,502	14,523,723	850
Ramany	..	..	..	..	..	185	7,273,987	—	52,972	7,326,959	2,466
Bebe-Aibat	..	..	..	..	..	193	11,830,346	35,000	—	11,865,346	2,228
Total in September, 1906						1,596	39,408,824	126,600	337,133	39,872,557	869
Total in August, 1906						1,281	26,245,691	—	150,803	26,396,494	530
Total in September, 1905						141	2,100,083	—	6,164	2,106,247	1,323

In addition, there were produced at Binagadi from 12 wells, 27,573 poods.

The production by spouting in September was obtained from the following wells:—Nobel's well, No. 369, on plot No. 51c at Saboontchi, 50,600 poods; Nobel's well, No. 425, on plot 33c at Saboontchi, 41,000 poods; Caspian and Black Sea Society, well No. 27, on plot 29, at Bebe-Aibat, 19,000 poods; and the Schibaieff Co.'s wells, Nos. 5 and 7, on plot No. 29, 15,000 and 1,000 poods respectively.

The stocks of crude oil at the oil fields on the 1st October, 1906 (o.s.) amounted to 6,250,589 poods. The stocks at the refineries on the same date were:—Crude oil, 7,401,196 poods; illuminating oils, 5,341,962 poods; lubricating oils, 1,402,643 poods; residuals, 8,295,578 poods; other products, 254,831 poods; total at refineries, 22,693,210 poods; total at oil fields and refineries, 28,946,799 poods.

Amalgamation of the Interests of the Gulf-Guffey Oil Companies.

WHY RE-ORGANISATION HAS BEEN RENDERED NECESSARY.

In a circular issued to the shareholders of the J. M. Guffey Petroleum Co. and the Gulf Refining Co., the plan for the amalgamation and re-organisation of both these companies in view of the construction of a pipe line from Indian Territory to the Gulf of Mexico is set forth, while a most instructive summary is also given the stockholders of the causes which have rendered the re-organisation necessary. The contents of the circular are of great importance to all interested in the petroleum industry, as shewing the many difficulties which have been strewn across the path of those companies, who, by careful foresight and the exercise of remarkable business activity, lived through the depressed period which followed the collapse of the Spindle Top boom, to see what gives promise of being the dawn of a brighter day for the petroleum industry of America in general, and the Gulf coast in particular.

The circular, to which we have already referred, deals at first with the necessity for the re-organisation of the Guffey and Gulf Companies interests. It states that the J. M. Guffey Petroleum Co. was organised in May, 1901, shortly after the discovery of oil at Spindle Top, which was the first oil field discovered in Texas. At that time it was supposed that the supply was practically inexhaustible, and the company at its organisation acquired a very large territory, upwards of 1,000,000 acres of what was supposed to be undoubtedly and practically invaluable oil territory; and for this it issued \$15,000,000 of capital stock. It was very soon discovered, however, that the Spindle Top field was of exceedingly limited area, the fact being that 90 per cent. of the entire production of that field has come from about 100 acres. It was also found that the life of the field, contrary to all expectations, was exceedingly short, the wells very soon ceasing to flow, and within a few years it practically disappeared as a producing field. A little more than five years have elapsed since the discovery of the Spindle Top field, and in that time five additional fields have been found. The total productive areas of all these fields probably does not exceed 1,000 acres, and at the same time they have been found widely scattered, the fields or pools so developed being as much as 190 miles apart, which has entailed not only a large expenditure in the discovery of the fields, but also very great outlays of capital for pipe lines and storage facilities. These fields also have, all of them, had but a short life. At the present time the total production of oil in the State of Texas is about 30,000 barrels per day, and of this only about 12,000 barrels is of such quality as to be available for refining. The Louisiana fields are producing about 15,000 or 20,000 barrels per day, but there are no pipe lines connecting this field with the properties of the Guffey and Gulf Companies, and the oil is not generally of such quality as to be refinable.

Notwithstanding the fact that more prospecting has been going on than ever before, no new fields have been

discovered in Texas for nearly two years past, and the production is rapidly declining.

The capacity of the Gulf Refining Co., organised shortly following the organisation of the J. M. Guffey Petroleum Co., and which is the principal purchaser from the Guffey Co., is 12,000 barrels of crude oil per day, and this amount is acquired for the economical operation of the refinery.

It is therefore apparent that even if the Gulf Refining Co. could get all of the refinable crude oil produced in Texas, it would be hardly sufficient for the daily operation of its refinery; but the fact is that it is able to get only about one-half of this daily production, so that the present operation of the refinery depends to one-half of its capacity upon the accumulated stocks of oil, which are being rapidly depleted, and at the present rate will be entirely exhausted in about nine months.

It should be observed that the distance of this oil-producing territory in Texas from the coal fields (the nearest being the Indian Territory) gives to fuel oil a very high fuel value, and as the supply of fuel oil diminishes, the price of course increases, and as the oil used for refining is equally available for fuel purposes, the price of oil for fuel soon reaches a point where it is more profitable to sell the product for fuel oil than to refine it.

Since the discovery of the Texas oil fields, there have been very extensive developments and large discoveries of oil in the Indian Territory and Kansas fields, the nearest to the Texas fields being of course the Indian Territory fields. These oils are not only cheaper than the Texas oils, but are also better for refining, and as the competitors of the Guffey and Gulf Companies are buying and refining these oils, it is, of course, impossible for these companies long to stand such competition. As an illustration of what this means, we cite the following: - Indian Territory oil of 32 degrees gravity and better is selling at 39 cents, while Texas oil averaging 22 degrees gravity is selling at 65 cents. When you take into consideration the fact that the nature and composition of the Indian Territory oil makes it more cheaply refined, and the further fact that with the Kansas and Indian Territory oils the higher grades of refined products are equal to those from Pennsylvania oil, it is impracticable, with the limited amount of Texas oils available for refining, and the high prices and uncertainty for a continuance of the supply, to compete with these other oils.

Again, viewing this matter from the standpoint of the Guffey Co. alone, it has a large investment in pipe lines and tank cars, which would be practically a total loss if the supply of oil becomes wholly or practically exhausted, and in order that these pipe lines may be operated profitably, requires a continued and large supply of oil; and under existing conditions, in order to assure a sufficient supply of oil for the profitable operation of

these pipe lines, it is essential that the lines shall be connected with the Indian Territory fields. In like manner the Guffey Co. has a large investment in its fleet, and as these vessels are specially constructed for the carrying of oil, unless a supply of oil is provided adequate to keep this fleet employed, a large loss will necessarily result.

Under these circumstances, the holders of the larger amount of the indebtedness of these companies, and of a majority of the shares of stock of each company, deem it necessary to the protection of their interests as such creditors and stockholders, that arrangements be made so that the oil supply from the Indian Territory fields shall be available for use to the Guffey and Gulf Companies.

To do this will require the construction of about 450 miles of pipe line, in addition to a large amount of tankage and other expenses necessarily connected with the undertaking, and it is estimated that these expenditures will probably amount to \$7,000,000.

The Guffey Co. has an issue of \$5,000,000 of first mortgage 5 per cent. gold bonds, which mature at the rate of \$500,000 in each year, beginning on June 1st, 1907.

The Gulf Refining Co. has an issue of \$750,000 of first mortgage 5 per cent. gold bonds, maturing \$75,000 in each year, beginning on June 1st, 1907.

Each of these companies has a large floating indebtedness, the combined floating indebtedness of the two companies aggregating approximately \$2,600,000. In addition to this, the Guffey Co. has outstanding \$190,000 of Car Trust certificates.

Neither of these companies separately, nor both together, have any credit for the purpose of extending the operations of either or both so as to reach the Indian Territory fields, and provide a supply of oil for their continued operations.

It seems plain, therefore, that unless this large expenditure is undertaken and done for the benefit of these companies, they will soon be in a position where their business will be entirely unprofitable, the stockholders

will lose their equity in the property and any prospective profit therein, and the properties will necessarily be sold under foreclosure proceedings.

THE LAST OF THE BUFFALO OIL COMPANY OF AMERICA.

A PATHETIC CIRCULAR.

The Buffalo Oil Co. is now no more; its operations in the Humble oil field have been unsuccessful, and the stockholders have now to mourn its death. The secretary of the company has recently sent out a circular to those interested which pathetically explains the whole position. It states *inter alia*:—"In our last circular letter of May 31st, 1905, it was shewn that the resources of the company were about exhausted, and it was then decided to suspend operations, except in regard to work on wells just then completed. These wells were worked on more or less during the following six months, but without permanent success, and were finally abandoned. In March of this year a shallow stratum was found at Humble which gave substantial evidence of being very profitable to operate, and it was decided to make one more effort there, to regain at least a part of our former losses; accordingly two wells were made, both of which proved to be failures. This last and final effort has exhausted our entire resources, and made it necessary to dispose of all machinery, pipe, etc., together with the various parcels of land owned by the company, in order to meet the obligations thus incurred. These lands, acquired at fabulous prices during the 'boom days' at Beaumont, have depreciated to a nominal acreage value, and have been disposed of on this basis. It is with much regret that this statement is sent out, as the management feels that it has made an honest and faithful effort—but the odds were against us, and the 'Buffalo' only yields to the same fate which overtook most of the other oil companies much earlier in their history."

Petroleum Shipments to Alaska and Hawaii.—The shipments of petroleum from the Pacific ports of the United States to Hawaii and Alaska during August totalled 3,400,000 gallons. Of this quantity 3,300,000 gallons was crude oil, and 140,000 gallons refined illuminating oil. For the most part shipments were from San Francisco.

THE OPERATIONS OF THE BAKU REFINERIES.

STATISTICS FOR AUGUST, 1906 (in poods).

I.—MANUFACTURE OF ILLUMINATING OILS.

Distillation.

	Submitted to Distillation.			Products Received.				
	Crude.	Other Products.	Total.	Kerosene.	Residuals.	Other Products.	Loss.	Fuel used.
Aug. August	14,792,219	163,643	14,955,862	3,999,524	9,659,628	890,670	405,040	778,040

Refining

	Submitted to Refining.			Refined Products Obtained.				Chemicals used.	
	Kerosene.	Other Distillates.	Total.	Kerosene	Other Products.	Total.	Loss in Refining.	Acid.	Soda.
August	3,858,730	—	3,858,730	3,777,177	50,132	3,827,309	31,421	12,604	806

II.—MANUFACTURE OF LUBRICATING OILS.

Distillates Received.

	Machine Oil.	Spindle Oil.	Cylinder Oil.	Goudron.	Solar Distillates.	Residuals.	Other Distillates.	Loss in Distilling.	Fuel used.
August	444,657	182,500	12,692	504,456	197,200	—	73,000	206,129	345,801

Refined Products Received.

	Spindle Oil.		Machine Oil.		Cylinder Oil.		Loss in Refining.		Chemicals used.	
									Acid.	Soda.
August	59,767	..	556,296	..	15,064	..	76,651	..	806	90

The output of benzine distillates amounted to 35,474 poods in August, against 42,985 poods in July. The output of refined benzine was 22,645 poods against 32,210 poods in July.

THE SUPPLY OF PETROL FOR MOTOR FUEL.

EXAMINATION OF DR. PAUL DVORKOVITZ.

As we mentioned in our last issue, Dr. Dvorkovitz has recently been one of the principal witnesses before the Fuels Committee of the Motor Union of Great Britain and Ireland—a committee which is sitting to enquire into the subject of motor fuel. In view of the importance attaching to the subject, we give the evidence of Dr. Dvorkovitz *in extenso*. We might add that the article referred to as appearing in the *Car* was afterwards reproduced in the PETROLEUM REVIEW during April, 1905, and in this it was pointed out by the writer that from experiments he had conducted, it was proved that the chief guide as to the suitability of a motor fuel was not in its specific gravity but in the range of the boiling points of the various fractions. The evidence of Dr. Dvorkovitz was as under:—

Q. You contributed an article to the *Car* on March 28th of this year on "The World's Supply of Petrol." Have you any reason to modify the general conclusions stated in that article?—A. No, except that at the present time the supply of petrol from Russia is very limited, and, consequently, the three principal sources are America, Sumatra (including Java and parts of Borneo), and Roumania; but the total production of crude oil available, which was about 30,000,000 tons of last year, has enormously increased.

Are there any signs of a possible falling off in the supply, let us say, during the next generation or two?—No. On the contrary, there is every sign of an increasing production of crude oil, that will keep pace with any demand made upon it. In fact, since the publication of my article new fields have been opened which produce at least 10,000,000 tons of crude oil per annum—that is to say, an increase in nine months of $33\frac{1}{3}$ per cent., which I should think is considerably greater than the increase in demand.

What are the chief purposes for which the crude oil is used?—For illuminating oil, for lubricating oil, and for fuel. I mean by fuel, not fuel as usually understood by motorists, which is petrol obtained in the process of manufacturing illuminating oil, but the fuel which is used by railway companies, steamship companies, and various manufacturing concerns in the form of (1) residue left after taking off the petrol and illuminating oils, or (2) in the form of crude oil, without eliminating any of the products mentioned.

Then there is evidently an important distinction between these two kinds of fuel which must have a great effect on the petrol supply?—Yes.

What regulates that?—The answer to this would be an exceedingly complicated one, since it involves not only the question of the demand for illuminating oil, but is also affected in an important way by the price of coal. Briefly, the explanation is that in the former case in distilling crude oil to obtain illuminating oil, petrol is produced as a by-product, and it does not pay to distil crude oil merely to produce petrol. If, however, the price of coal is high, a good price can be obtained for

liquid fuel, hence it pays to use liquid fuel in the form of crude oil without any distillation, and consequently no petrol is produced. You will observe the remarkable feature in the problem of the petrol supply is that the demand for petrol has hitherto not been a serious factor in the matter of its output.

Do we understand you to say that the quantity of crude oil treated by distillation is regulated entirely by the respective prices of illuminating oil and coal?—You must be very careful so as not to confuse the two things. In some territories as (Group 1) Pennsylvania, Ohio, Roumania, North Caucasus, and Dutch India (Sumatra), the distillation is simply regulated by the price of illuminating oil. In other districts as (Group 2) Texas, Kansas, California, Indian Territory, Baku, and Borneo, the amount of distillation is regulated by the price of coal. About 60 per cent. of the whole world's production of crude oil is obtained from the latter-mentioned fields, and 40 per cent. from those mentioned in Group 1. I will put the whole matter this way: in the former, there is less demand for fuel than for illuminating oil, while in the latter there is more demand for fuel than illuminating oil.

Which of these two groups of territories is the most important for the petrol supply?—For the time being, the whole supply of petrol comes only from Group No. 1, the crude oil from which fields contains about 10 or 12 per cent. of petrol. The other fields in Group 2, however, yield an oil containing at least 5 per cent. petrol, but owing to the present unscientific and erroneous (from a practical point of view) method of estimating the quality of petrol, these valuable fields mentioned in Group 2 are, unfortunately, closed. Now, there is another point of importance, and that is, that not only do what may be called the closed fields (closed owing to this unfortunate standard) produce 60 per cent. of the world's total supply of crude oil, but they are the very fields which are being more and more developed, whereas the other group of fields are falling relatively behind, inasmuch as investors prefer to put their money rather into fields which supply fuel than into fields which chiefly supply illuminating oil, as in Group 1.

Do you think that the petrol excluded by the specific gravity standard which you deplore would be equally good and satisfactory for use with motor cars with that now in vogue?—Yes. Both from a theoretical point of view, and from long and careful tests of a practical nature, I am in a position to state that drivers of motor cars are unable to tell the difference, if they do not know the kind of petrol they are using; and I believe that the whole question at the present moment is more a matter of custom rather than anything else, and is simply a survival of the days when practically nothing was known of the subject, and it was thought that the lightest oil must necessarily give the best results in the petrol motor. This idea, if I may call it so, probably dates from the

days of the early surface carburettor, when there was more ground for its being held.

Do you think that if users were to adopt a more rational standard it would open up this new and large source of petrol supply?—I am absolutely certain that with the ever-increasing consumption of petrol this would be the case, and the inevitable result would be an important reduction in cost.

You are not then afraid that Trusts or Monopolies would defeat this action on the part of users?—No; the area of supply would be extended over the whole world instead of being very limited, as at present, to one set of fields. Even now there is no monopoly; far from it, a fairly keen rivalry exists. If there is any monopoly, however, then it is that produced by the adoption of the present standard by the users themselves.

To what then do you attribute the high price?—I attribute it partly to the foregoing—viz., the artificial standard—and partly to high railway tariffs and also vexatious regulations of the public authorities.

Would you be willing to give us your views as to how we may meet this matter, as there is not time to deal with this important question to-night?—I shall be most pleased to come before the Committee again and speak further on these questions, which are economic, and also to deal with the other side of the question—the scientific one—which has not yet been touched.

At a further meeting of the Committee last week, Dr. Dvorkovitz was again examined as under:—

Q. You stated on the last occasion that it was impossible to judge of the quality of petrol which is capable of giving the best results by simply taking into account its specific gravity?

A. I based this statement upon the following facts:—The various kinds of petrol at present sold for motor car purposes are a mixture of a number of hydrocarbons or chemical compounds which consist of carbon and hydrogen. Now the proportion between the carbon and hydrogen in these various hydrocarbons depends to a certain extent upon the source from which the crude petroleum is obtained, but the ratio of the two varies very little, this being 84.5 per cent. carbon and 15.5 per cent. hydrogen in Pennsylvania crude oil, and 86 per cent. carbon and 14 per cent. hydrogen in other crudes. Therefore the calorific value of the various benzines obtained from the above crudes must be very close to one another.

Q. Can you give a specific example shewing that the gravity does not affect the calorific value?

A. Yes. Let us take Pennsylvanian oil. The lowest liquid hydrocarbon obtained from the Pennsylvanian oil is known as pentane, which has a specific gravity of 0.628 and a boiling point of 100.4° F., while the highest liquid hydrocarbon of the same benzine series is called octane, having a specific gravity of .703 and a boiling point of 257° F. Here you will notice a very great difference not only in the specific gravities but in the boiling points, yet their respective values from a calorific point of view are practically the same, pentane having 83.4 per cent. carbon and 16.6 per cent. hydrogen, whilst octane possesses 84.2 per cent. carbon and 15.8 per

cent. hydrogen. The above figures, therefore, conclusively prove that the specific gravity of any spirit may be a matter of quite secondary importance in deciding the question as to the suitability or otherwise of it for motor fuel purposes.

Q. If, therefore, specific gravity does not play an important part in the question of the utility of certain hydrocarbons for motor purposes, what is then the "hall mark" as to the suitability of the spirits? In other words, what is it, that the motorist has to be assured upon when purchasing fuel for his car?

A. The chief deciding point in my opinion and in fact the only deciding point which will be found to be thoroughly satisfactory in practice—is the temperature at which the vapourisation of benzine will take place. Once the motorist knows this, then he can most assuredly depend upon it that his spirit will give complete satisfaction. Let me emphasise my contention. If motor spirit will evaporate entirely in the air without leaving any trace of oily matters, then such spirit should most certainly be considered as satisfactorily answering all the requirements of the motorist, no matter what its specific gravity is. It stands to reason that if a spirit under ordinary air exposure will entirely evaporate, still more so will it when drawn by suction or used under air pressure.

Dr. Dvorkovitz then shewed experiments with six samples of motor spirit upon white paper whose range of specific gravities were from the lightest to the heaviest of benzines. All evaporated except one of specific gravity, .750, which had not been properly refined, whereas one of the same specific gravity, .750, which had been properly refined completely evaporated, leaving no trace of oily substances. He remarked that he had a sample of .694 gravity, representing the old standard at which supplies of motor spirit used to be obtained, also a sample with a specific gravity of pf. .720 a good average of the petrol now sold, but it was to the samples whose specific gravity ranged from .739 to .785 that he particularly desired to draw attention. He pointed out that two samples of .750 specific gravity, a white sample having been re-distilled in his own laboratory from the one possessing the yellow tint.

Q. Do you think that all the samples you have shewn are equally suitable for use by the motorist?

A. Yes, with this difference, that the heavier the specific gravity, the greater the calorific value per unit volume, and accordingly it requires a slight adjustment in the direction of increasing the air supply in order to ensure complete combustion.

Q. Do you think the motorist will easily make this adjustment?

A. If he would throw aside prejudice, he would find it just as satisfactory to use heavy as light spirit.

Q. Surely you do not maintain that all spirit supplied is equally good?

A. No, but weight is not the true criterion. The spirit must be pure and free from oily substance. I suggest that purity of spirit can be tested by any motorist by simply pouring a few drops on a piece of

white paper, and seeing if it entirely evaporated without leaving any oily traces.

Q. Then purity is independent of specific gravity or weight?

A. Yes. You may have a pure spirit of specific gravity ranging from .680 to .785, and I believe it would be practically impossible to detect any difference in their use either as regards cleanliness or power produced, except that of the two, you would get more work out of the heavier spirit and at considerably less cost.

Q. On the last occasion you indicated that standard should be taken by the boiling point. Do you think, having regard to your evidence to-day, that it is really necessary to have a standard at all except that of purity?

A. My answer to this is that if once you accept the standard of purity, as tested by complete evaporation, you compel the manufacturers to adopt a fixed minimum boiling point. Speaking generally, the question of boiling point is so difficult and complicated, and varies so much with the material produced in each oil field, that it would be impossible for motorists to adopt this standard, or even understand much about it. I, of course, in my previous evidence referred to the boiling point as the test for the manufacturer and expert, and maintain that if the motorists will only demand purity as judged from the simple test I have suggested, they will secure all they want for practical use.

Having, I trust, proved to your full satisfaction that neither from a scientific nor practical point of view the present specific gravity standard for motor spirit should be applied, I may now touch but briefly upon the economic aspect of the question. My article in the *Car*, to which reference was made at the last sitting, dealt thoroughly with this part of the question, so that it only remains for me now to repeat the views I expressed at the last meeting, viz., that if the motorists will remove the present restrictions as to specific gravity, they immediately let loose practically unlimited quantities of the heavier class of benzines from the majority of the oil fields of the world. Borneo, Russia (excluding Bebe-Aibat) and America (excluding Pennsylvania) would all be brought into the category of large producing countries, while in other parts of the world, supplies would be forthcoming that would be able to meet the demand for almost all time. The monopoly of supply which has been created by the motorist himself would be broken down, and in its place would rise healthy competition which would assure to the automobilist a cheap and continuous supply of motor spirit as satisfactory as that with which he is now familiar, yet for which he has to pay ever increasing prices.

Dr. Dvorkovitz then handed in an important collection of papers concerning the taxes, storage, railway carriage and restrictions upon petrol, of which the secretary has undertaken to make an abstract, and which will be published on a future occasion. Dr. Dvorkovitz pointed out that the whole evidence from these documents conclusively proved that the retail price of petrol was made unusually high from such artificial causes, which it should be the business of the Motor Union to do all they could to remove.

ROUMANIAN PRODUCTION DURING OCTOBER.

The production of crude oil in the Roumanian fields during October, compared to September, was as under:—

	October. Tons.	September. Tons.
Prahova District—		
Bustenari	45,988	44,729
Campina-Poiana ..	7,050	6,699
Moreni	17,589	17,090
Baicoi-Tinta	3,860	3,242
Other fields	784	855
Total for Prahova ..	75,281	72,878
Dambovit District ..	1,523	1,507
Buzeu	903	946
Bacau	797	793
Total	78,504	76,124

The October figure is not complete, as it does not include the production of certain firms, who have delayed their returns. If we estimate this quantity at 1,500 tons, we find that the total production was 80,000 tons, which is the highest monthly figure ever recorded in Roumania.

The production of the leading firms was as under:—

	October. Tons.	September. Tons.
Steaua Romana	23,656	21,435
Bustenari Co.	11,296	11,318
Campina-Moreni Co. ..	12,017	11,081
International Co. ..	3,682	4,164
Telega Oil Co.	3,854	3,763
Colombia Co.	3,239	3,694
F. M. Pleyte (Moreni Syndicate)	2,660	3,450
Romano-American Co. ..	4,965	4,939
Trajan Co.	1,660	1,860
Aquila Franco-Romano	1,235	1,269
Secoleanu Bros.	1,067	1,122
Grigorescu and Vladescu	1,218	—

OIL ENGINES FOR MARINE PURPOSES.

At a recent meeting of the Institute of Marine Engineers, lately held at 58, Romford Road, E., a paper was read by Mr. F. M. Timpson on the use of "Oil Engines for Marine Purposes." Mr. Timpson compared the safety of boats propelled by oil engines with that of petrol motor-boats—much to the advantage of the former. The author stated that a large "drifter" had recently been fitted with a 250-brake horse-power oil engine, and a 60-ton sailing barge had also been fitted with a 60-brake horse-power oil engine, and in both cases satisfactory results had attended the experiments. Reversing was managed with a reversing propeller, and the author claimed that there was no objection to this if the design were carefully thought out. Various other points and good features of oil engines were touched on by the author. In the discussion which followed it was agreed that oil engines seemed to have a good future before them in this work, though some speakers hesitated to accept the statements made regarding reversing propellers.

THE *Reichsenzieger* (Berlin) reports that an exhibition of motors, motor cars, motor boats, as well as accessories and designs, will be held in Bergen from the 5th to 14th July next. In connection with it a conference of the Norwegian, Swedish and Danish fishing industry will be held. The exhibition is to be Scandinavian, but foreign motors will be admitted if exhibited by Scandinavian or Danish agents. The address is: Motorudstillingskomiteen, Bergen, Norway.

BATOUN EXPORT TRADE DURING OCTOBER.

The petroleum export trade of Batoum during October proved very small, even smaller than in August. The total exports amounted to 2,090,000 poods, as against 2,347,000 poods in August. The main cause of this is the decline in the export of Russian kerosene to England, to which country not a single cargo of kerosene was shipped in October. There was also a great decline in the export of other products to England, and the total exports of all products to this country in October did not exceed 55,000 poods, against the normal figure of 2,000,000 poods. The cause is to be found in the waiting attitude adopted by the English importers.

The following are the figures of the arrivals of petroleum products from Baku, shipments from Batoum during October, and stocks at Batoum on October 31st (in poods) :—

	Arrivals.	Shipments.	Stocks on Oct. 31st.
Refined kerosene ..	2,323,000	1,300,000	2,087,000
Kerosene distillate ..	—	—	24,000
Solar oil ..	125,000	—	485,000
Machine oil ..	804,000	688,000	462,000
Spindle oil ..	66,000	15,000	34,000
Cylinder oil ..	25,000	7,000	20,000
Vaseline oil ..	—	40,000	117,000
Lub. oil distillate ..	—	—	17,000
Residuals ..	200,000	40,000	277,000
Total ..	3,543,000	2,090,000	3,523,000

In view of the smallness of the exports, the stocks at Batoum increased during the month by over 1,000,000 poods. The largest increase occurred in the stocks of kerosene, namely, 700,000 poods. Of the total quantity of kerosene exported, 494,000 poods were shipped in cases.

There was an improvement in the barrel oil trade, as a result of an increased demand from Russian home ports. Generally, the shipments of various products to Russian ports in October were inconsiderable, having amounted to 488,000 poods. Apart from England the exports to other European countries were also small. To Germany there were shipped 254,000 poods, to Belgium 294,000 poods; to France only 9,000 poods, and all other European countries 138,000 poods. The largest quantities were shipped to Turkey and the Balkan States, which took 635,000 poods. To Alexandria there were shipped in bulk 217,000 poods.

THE HOUSING QUESTION AT THE BAKU OIL FIELDS.

With commendable promptitude, the Russian Government have lately taken the first step toward settling the various questions affecting the petroleum industry, discussed at the recent conference at St. Petersburg.

At a meeting of the Council of Ministers held on November 18th (o/s) it was resolved to grant to the petroleum producers, free of charge, the use of Government plots of land at Balakhany and Bebe-Aibat for the purpose of erecting workmen's villages, on certain conditions to be laid down by the Minister of Commerce. The Bebe-Aibat plot, of an area of 175½ acres, and the

most suitable for the purpose in view, has hitherto been under the control of the Ministry of Marine, who declined all proposals in regard to the same. It has now been resolved to transfer the control of this plot to the Ministry of Commerce.

It is to be hoped that the other questions will receive the same prompt attention at the hands of the Government, and the early return of the petroleum industry to prosperity will thus be assured.

ASPHALT IN THE TEREK PROVINCE.

ANALYSIS OF THE PRODUCT.

Asphalt (which is locally known as "Kir") is found in many places in the Terek Province, as, for instance, in the mountains near Vladikavkaz, near the village of Braguny, near the station of Gudermes, in the eastern part of the province. The most important deposits of this material have long ago been described by Mr. Konshin, the well-known mining engineer. These deposits are situated in the neighbourhood of the village of Michaelovskaia, near Sernovodsk station on the Vladicaucasian Railway, which district is celebrated for its sulphur springs.

The Braguny and Vladikavkaz asphalt (or, to be more correct, asphalt earth) is very poor, containing not more than 6 to 12 per cent of goudron. The asphalt from Michaelovskaia, as it was first found there, was of no better quality, but lately further digging by local people has revealed a deposit rich in bitumen, and samples of it have been presented to the laboratory of the Vladicaucasian Railway for analysis.

The asphalt has the appearance of a carboniferous mass, resembling soft brown coal. Its specific gravity is 1.2. It is entirely insoluble in water, but dissolves well in carbon bisulphate. By treatment with this reagent it is possible to extract from it 86.5 per cent. of bitumen, which is very brittle. By adding to it heavy residuals it is possible to make it sufficiently elastic for use for asphalt works.

A further analysis of the extracted bitumen gave the following results :—

	Per Cent.
The bitumen contains ashes (incombustible residue) ..	4.35
Sulphur (determined by the Lidoff method) ..	0.888

The elementary analysis yielded the following results :—

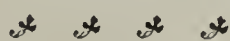
Quantity of Material taken for Analysis.	Carbonic Acid.	Water.	Carbon.	Hydrogen.
0.1820 ..	0.5110 ..	0.1340 ..	76.6 ..	8.01 ..
0.2580 ..	0.7025 ..	0.1790 ..	74.25 ..	7.708 ..
Average ..	— ..	— ..	75.42 ..	7.589 ..
Nitrogen (by the Queldal method) ..	..	..	..	0.06% ..

The composition of the bituminous part of the asphalt from Sernovodsk is as follows :—

Carbon ..	..	..	..	..	75.42
Hydrogen ..	..	..	..	..	7.859
Nitrogen ..	..	..	..	..	0.06
Sulphur ..	..	..	..	..	0.888
Ashes ..	..	..	..	..	9.35
Total ..	..	..	..	..	88.579

The difference, i.e., 11.421 represents oxygen.

The American Mid-Continent Fields.



. . Tulsa—the New Centre. . .

Tulsa is the new centre of the great oil industry of the Indian Territory, and there is every prospect that it will retain this important position. Until the last few months Bartlesville, located 50 miles north of Tulsa, was the central point from which operations radiated. The Bartlesville pool, the rich Osage pool in Oklahoma just west of Bartlesville and the shallow sand districts in the Cherokee Nation east of Bartlesville served to make that city the Mecca of the oil interests. But a year ago a wild-cat well completed by Robert Galbreath and associates on the Glenn farm, 15 miles south of Tulsa, in the Creek Nation, revealed a new and prolific pool. There was no immediate exodus to this latest district. Although it was known that the Galbreath well indicated the presence of an oil sand that would probably rival in productiveness the best of the developed pools, operators were loath to rush in and drill the new territory because they already had more oil than they were able to dispose of on a 50-cent. market. It was not until this last summer, says Mr. Holland Reavis in one of his brightly written articles, that the competition of additional wells in the Glenn field, further demonstrating the extent and richness of the district, compelled the attention of the producers. The wells shewed a capacity in some instances as great as 2,000 barrels a day, flowing naturally. The oil was of superior quality, testing 37° B. in gravity, and being especially desirable for the manufacture of gasoline and other light products. Late in the summer operators began to flock to Tulsa, and the rush for holdings in the new field began in earnest.

Tulsa is a city of about 8,000 inhabitants. It is located in a fertile country, and has other mineral resources besides petroleum, principal among these being coal, the mining of which will some day—and that not very distant—be an important industry. The coal deposits of the Tulsa district are an extension of the veins which are being worked in the McAlester district. Clay beds, which furnish material for the best of brick, are found at Tulsa, and the brickmaking industry is thriving here. As a railroad centre Tulsa is advantageously situated. It has the M. K. and T., the Santa Fe, the Midland Valley, the A. V. and W. and the main line of the Frisco, with good prospects of being on the route of the new Harriman road, which is to connect the Union Pacific with the Southern Pacific (H. and T. C.) system at Denison, Texas.

With such excellent railroad facilities it is not strange that Tulsa is proving a satisfactory headquarters for Mid-Continent oil operations. All of the different districts may be reached direct from this point without change of cars. The Robinson and Brady hotels in Tulsa present the same scenes to-day that were witnessed at the Carl Leon hotel in Independence during the Kansas oil excitement, and later at the Almeda hotel in Bartlesville.

During the past few weeks the attention of oil operators

has been attracted to Tulsa with a greater degree of interest than ever before by reason of the announced intention of Texas interests, having large investments in refineries at Port Arthur, to lay pipe lines from the Glenn field, and possibly from other Territory districts, to connect with the western termini of their present pipe-line systems in the south-east Texas region. Heretofore the Prairie Oil and Gas Co., operating the Standard's pipe lines in the Mid-Continent fields, has been the only large purchaser of crude oil in the Kansas, Indian Territory, and Oklahoma districts. It has handled all the oil it possibly could with its facilities, and it should be here mentioned that these facilities have been increased as fast as has been possible. The Prairie Co. is now taking about 65,000 barrels a day from all districts. The capacity of the entire field in its present stage of development is put at from 115,000 to 120,000 barrels a day. It is said by those familiar with the various districts that this capacity could be doubled, for a time, at least, in 60 days, or even in a shorter period. No one believes, however, that such a production could be maintained.

Aside from the Prairie Co.'s purchases there has been practically no outlet up to this time for Mid-Continent oil. All of the Independent buyers combined are not taking 2,500 barrels a day. With such a situation existing it is easy to understand the interest that is felt by producers in the proposed territory to the Gulf pipe lines. All preparations are being made to lay two such lines. Five weeks ago the interests represented in the J. M. Guffey Petroleum Co. and the Gulf Refining Co., through C. H. Markham, general manager of the former company with headquarters at Beaumont, appeared in Tulsa, purchased land for tankage sites and started engineers to work surveying for a gathering system in the Glenn field and a loading rack on the Frisco at Kiefer, 19 miles south of Tulsa. Plans for this work have been submitted to the Secretary of the Interior, and the construction of ten 55,000-barrel tanks will be started as soon as the material arrives. The Riter-Conley Co., of Pittsburgh, has the contract to erect the tanks. The intention is to install the gathering system, connect with the producers' settling tanks and be taking oil before January 15th. Four to five thousand barrels a day will be shipped in tank cars from Kiefer to the Gulf refinery at Port Arthur. Trains will be run consisting solely of tank cars, and will go through as special fast freights over the Frisco, the Houston and Texas Central and the Texas and New Orleans, the last two being Southern Pacific lines, direct to Port Arthur.

The reorganisation of the Guffey and Gulf Companies, as is explained upon other pages, has been made necessary for the purpose of providing capital with which to construct an eight-inch pipe line from Tulsa to the western terminus of the present Guffey lines in South-east Texas, a distance of 430 miles.

THE OIL FIELDS OF BEREKEI.

By Dr. K. KHARITCHKOFF. (*Translated from "Petroleum"*).

For more than 15 years there was evident in the Russian petroleum industry a tendency towards discovery and developing new oil fields. This resulted on the one hand that the country round the Caspian Sea, the island of Tcheleken, as well as the Central Asian steppes, on the other hand individual districts in the north of Baku, were thoroughly investigated. Among the latter, the Berekei field, situated on the western shore of the Caspian Sea, in the Daghestan province of the Eastern Caucasus, deserves special attention. It is about 22 versts distant from the town of Derbent.

The local natives—the Lesgines—have from time immemorial been producing petroleum from wells and pits and used it as a grease and for curative purposes. The first borehole was sunk at Berekei in 1895 by Dr. Kosliakowsky. This well attained a depth of 329 feet and produced certain quantities of crude oil. The oil produced was accompanied by salt water and gases. It had a specific gravity of 0.9056 at 15°C. and yielded by distillation up to 31.8 per cent. of burning oil of good quality and residuals of very high specific gravity (0.978), which are unsuitable for lubricating oil manufacture. In 1902 borings were started by Messrs. Nobel Bros., and the first well was sunk to a depth of 640 feet and at that depth produced an intermittent spouter yielding a light crude oil of a specific gravity of 0.868. This spouter continued to act at intervals for a period of seven months, and yielded almost regularly about 3,000 poods per day.

The author visited this remarkable oil field in January, 1903, on behalf of the railway company, and took several specimens of oil for analyses. Apart from Messrs. Nobel, borings had in the meantime also been started by other firms, such as Balabanoff and others, and the striking of the above-mentioned spouter created a great sensation.

The distillation of the samples of oil taken by the author, carried out in the laboratory of the Vladicaucasian railway, yielded the following fractions:—

		Per Cent. of Distillate.	Specific Gravity at 20° C.
Up to 100° C.	.. ..	1.5	—
100–110	.. ..	0.3	—
110–120	.. ..	0.6	—
120–130	.. ..	1.1	0.7405
130–140	.. ..	1.4	0.7408
140–150	.. ..	2.4	0.7465
150–160	.. ..	3.2	0.7568
160–170	.. ..	4.0	0.7647
170–180	.. ..	2.0	0.7751
180–190	.. ..	3.40	0.782
190–200	.. ..	4.85	0.794
200–210	.. ..	1.40	0.8016
210–220	.. ..	3.10	0.8063
220–230	.. ..	1.8	0.8163
230–240	.. ..	4.3	0.8294
240–250	.. ..	1.8	—

The distillation was carried out in a copper vessel of 200 grammes capacity.

For practical purposes the above fractions can be divided into the following products:—

	Per Cent.	
Light benzine	1.5	Up to 100° C.
Heavy benzine or ligroin	5.85	100–150
Illuminating oil	29.42–34	150–270
Residuals	56.85	—

The illuminating oil obtained burnt fairly well, and had a specific gravity of 0.8045. The flash point, by Abel-Pensky test, was 28.5° C. The residuals, by the Martens-Pensky test, shewed a flash point of 127° C., and a viscosity, by Engler, of 4.56. For the manufacture of lubricating oils these residuals are of no value.

The author tried to divide the residuals into fractions by the cold method. After being refined with sulphuric acid and neutralised, the residuals were dissolved in amyl alcohol, and the several fractions were settled out by means of 95 per cent. ethyl alcohol. In this way the residuals were divided into five fractions, which had the properties of solar and spindle oils.

The Berekei oil is almost free of paraffin and contains only 0.3 per cent. of solid hydrocarbons.

The elementary analysis of the residuals yielded the following results:—

	Per Cent.
Carbon	84.68
Hydrogen	12.10
Sulphur	0.72
Oxygen	3.15

The oil properties at Berekei were at first equipped in a very primitive way. Only later, in 1903, was a pipe line laid down to Berekei Station, and storage tanks were erected. From this point of view of the yield of kerosene and the quality of the latter Berekei crude oil must be considered as equal to Baku crude. The residuals obtained from Berekei oil must be recognised as a first-class fuel oil.

The geological structure of the Berekei petroleum deposit was thoroughly investigated by the geologists, Messrs. Ivanoff, Strijoff and Golubiatnikoff. The oil field is situated in a valley which is placed between the Caucasian mountains and the Caspian Sea, and forms the natural passage between Europe and Asia.

The oil strata consists of dark coloured clay, sands and sandstones. Messrs. Strijoff and Golubiatnikoff suggested the existence here of an anticlinal which is disputed by Mr. Ivanoff. The oil at Berekei is accompanied by hot salt water which, amongst other substances in solution, contains also iodide, bromide and strontium carbonate.

The gas issuing from the above mentioned borehole of Messrs. Nobel Bros. has the following composition:—

	Per Cent.
Carbon dioxide	12.82
Marsh gas	65.84
Ethane	19.92

The Berekei oil field, thanks to its convenient position near the sea, has possibly a great future in store for it. The country there, however, is very unhealthy owing to the prevalence of fevers and is infested with robbers, which renders life very insecure.

A GOVERNMENT AGAINST AN INDUSTRY.

Important Letter from the Standard Oil Company.

POINTED COMPARISONS.

Mr. William H. Libby, of the foreign department of the Standard Oil Co., has recently issued an important letter in which is contrasted the attitude of the governments of foreign countries towards corporations and combinations of corporations, with the position which the United States Government has taken up against the Standard. The statements contained in the letter are of so pointed a character that we quote them *in extenso*. They are as under:—

Concurrently with attempts of the Government to disintegrate the corporate organisation and industrial equipment of the Standard Oil Co. and of other companies, and thus paralyse their great commerce at home and abroad, it is both interesting and pertinent to note the policy and progress of the most formidable foreign rivals.

The desirability—the necessity, almost—of the concentration of brains and capital has been recognised without exception in all important petroleum producing countries of the world, and not only have corporations and holding companies on the general lines of the Standard organisation and other similar American organisations been created, but several of these have become international in their scope.

The Royal Dutch Co., of the Hague, and the “Shell” Transport and Trading Co., of London—two exceptionally powerful and ably administered corporations—have recently made public announcement of their amalgamation, one of the principal motives being to control the extensive producing and refining industry of the Dutch Indies, and thus further to fortify their natural advantages of cheap labour and geographical location in competing for the vast petroleum commerce of the Oriental countries containing more than two-thirds of the world’s population.

In Germany a holding company has recently been created under the auspices of the most powerful banks of the empire, to dominate the sale of both Russian and Roumanian products, not only in Germany itself, but in other European markets. The said holding company unites various important petroleum corporations heretofore in competition.

The Asiatic Co. (organised under the unfettered conditions attending the corporation laws of Great Britain) comprises three of the leading industrial corporations of England, France and Holland, respectively, with the avowed mission of controlling the distribution of Russian and Dutch Indies petroleum in the Oriental markets.

In Galicia a prominent industrial concern, allied with a powerful Austria-Hungary bank, has practically combined about 90 per cent. of the entire production and refining, with the avowed motive of rescuing the Galician industry from a period of semi-demoralisation (kindred to such periods in the history of the American industry prior to the extended organisation of the Standard Oil Co.), and to dominate the distribution of Galician petroleum products in the various export markets of Europe.

In Great Britain efforts indicating ultimate fruition have been long under way toward the fusion of heretofore rival corporations, the aim being to dominate the distribution of Russian and Roumanian petroleum in

Great Britain. Such fusions are in no wise incompatible with the so-called “companies acts” of Great Britain, which are apparently designed to encourage the utmost freedom of incorporation or individual action, so long as annual statements are made and annual taxes paid.

The essence of the English law apparently is that everybody has a right to form a combination, and that everybody else has an equal right to combine against such combination. This absolute liberty of commercial action is assumed to be the best natural correction of temporary abuses, and apparently crystallises the wisdom of the most experienced commercial nation in history.

Not only the extensive and prolific oil fields of Burma, but also the privileges of refining the output thereof, are under the control of a single corporation owned in Glasgow, which is protected and sustained by the Governments of India and Burma. This single corporation has free access to the markets of India, with its population of 250,000,000, while the petroleum products of other countries are subjected to an important export duty.

The distribution of illuminating oil in the domestic markets of Russia is effected almost exclusively by a combination of great producing and refining interests of that country.

The amalgamations cited (created and administered by some of the best industrial brains and most prominent capitalists of Europe), so far from receiving the opposition of governments, press and communities, so far from being regarded “conspiracies in restraint of trade,” or as ingenious subterfuges of a trade autocracy, are regarded abroad as being in the natural pathway of legitimate, economic and progressive commerce, and are especially commended when the motive is emphasised of eliminating the American product from the competitive markets. Against this array of formidable elements and innumerable opposing factors, the Standard Oil Co. is fighting in the world’s markets for the continued supremacy of American petroleum. The commercial battle could not be successfully waged minus the comprehensive organisation and equipment, at home and abroad, which the Standard Oil Co. has created at such enormous expenditure and through such unremitting effort.

The successful maintenance of the supremacy of American petroleum in the competitive markets abroad must carry the penalty of a constant commercial battle, in the outcome of which not only the Standard Oil Co. itself is concerned, but also the entire producing industry of the United States, the great labour classes and a host of vocations, directly or indirectly dependent upon its ramified operations. The valuation of its exports constitutes a highly-important factor in the adjustment of the international trade balances of the nation.

In the prosecution of this aggressive industrial policy, the Standard Oil Co. believes itself to be fairly entitled to the encouragements that other governments are giving to similar business interests.

For these reasons it would seem as if it was most important to the general business interests of the country, as well as its oil interests, that the organisation of the Standard Oil Co., which enables it to pursue and enlarge the world’s markets for American products, should be sustained rather than crippled or destroyed. For it is my deliberate conviction that the volume of American petroleum distributed in the world’s markets would have been immeasurably less under a less comprehensive equipment and policy than that of the Standard Oil Co.

LATEST QUOTATIONS OF PETROLEUM SHARES.

ENGLISH COMPANIES.

This list is restricted to companies who have paid dividends or who are producers.

Company	Capital Paid Up.	Value of Shares.	Latest Prices.
Assam Oil	£205,000	£1	5-3/4
Baku Russian Petroleum ..	£750,000 Ord.	£1	1/9-2/3
Bibi-Eybat " Petroleum Co. ..	£650,000 5 1/2 % Pref.	£1	3/9-4/3
Californian Oilfields .. .	£250,000 Ord.	£1	9/0-10/0
Commonwealth Oil Co. Pref	10/- paid up		4 1/8-4 7/8
Def..	£1 fully paid		3-1 1/8 pm
European Petroleum.. ..	£550,000 Pref.	£1	3-3 1/8
"	£550,000 Ord.	£1	1/6-2/6
"	£376,000 Deb.	£100	0/6-1/6
Russian Pet. & Liquid Fuel ..	£500,000 6 1/2 % Pref.	£1	79-82
Schibaieff Petroleum .. .	£600,000 Ord.	£1	10/9-11/3
Shell Transport & Trading ..	£575,000 6 % Pref.	£5	10/3 11/3
Spies Petroleum Company ..	£575,000 Ord.	£1	2 1/8-2 5/8
	£2,000,000	£1	6/9-7/9
	£1,000,000 Pref.	£10	29/3-30/3
	£312,500	10s.	9 1/4-9 1/2
			8/6-9/6

RUSSIAN COMPANIES.

Company	Nom. Value in Roubles.	Quotations on December 15th.	
		Lowest Roubles.	Highest Roubles.
Baku Naphtha Co.	100	573	575
Balakhany Naphtha Co. .. .	250	—	—
Caspian Society	1,000	4,575	4,600
Melikoff, A. C.	250	—	—
Mirzoeff Bros.	250	—	—
Naphtha Co. "Kavkas" .. .	250	—	—
Naphtha Trading Co., A. I. Manta-			
cheff & Co.	250	164	166
Neft Co.	250	160	—
Nobel Bros.	5,000	9,550	9,650
"	250	477 1/2	482 1/2
Rops and Co. V... .. .	250	—	—
Russian Naphtha Co. .. .	250	—	—
Tociety Mazout	250	—	—
Vumaieff & Co., J. G. .. .	250	—	—
Solga-Caspian Naphtha and Trading			
Co.	250	—	—
" (Second Issue)	250	—	—

SCOTCH COMPANIES.

Supplied by Messrs. MACLEAN AND HENDERSON, STIRLING.

Company.	Capital Paid Up.	Value of Share.	Latest Prices.
Broxburn Oil Co., Ltd., Ord. 8 1/2 pd	£199,750	£10	23
Do. 6 % Cum. Pref. ..	£100,000	£10	12 1/8
Burmah Oil, Ord.	£1,100,000	£1	62s. 3d.
Do. Pref.	£250,000	£1	25s. 9d.
Dalmeny Oil Co., Ord. (7 paid) ..	£37,800	£8 10s.	6 3/4
Do. 5 % Pref.	£18,900	£7	5
Oakbank Oil Co., Ltd., Ord. (fy. pd)	£45,000	£10	43s.
Do. New (£8 10s. pd.)	£131,750	£10	42s. 6d.
Pumpherstons Min. Oil Co., Ltd., Ord.	£110,500	17s.	6 1/4
(17s. paid)			12 1/4
Do. 6 % Cum. Pref.	£100,000	£10	
Tarbrax Oil Co., Ltd. Ord. (£1 pd.)	£38,350	£1	38s. 6d.
Young's Paraffin Co., Ltd., Ord. ..	£452,808	£4	76s. 3d.
Do. "B" Deb...	£150,000	£100	180

DUTCH COMPANIES.

Company.	Latest Quotations	Former Quotations	Florins.
Arnhemsche Petroleum Mij. ..	—	—	1,000
Aurora (Deb. 5 %)	93 3/4	95 1/4	—
Campina Poiana Mij.	—	18 1/8	—
Dordtsche Petroleum Mij. (Pref.) ..	128 7/8	128	500
" (Deb. 4 1/2 %)	101 1/2	101 1/8	1,000
Gaboës	—	—	—
Holl. Rumeensche Petroleum Mij. ...	33 1/2	33	1,000
Int. Rum. Pet. Mij.	106 3/4	107	500
Java Petroleum Mij. (Ord.) ..	—	—	1,000
" (Pref.) ..	—	—	—
Koninklyke Nederl. Pet. Mij. Shares	701	712	250-1,000
" Share certificates	710 1/2	715 1/2	1,000
Mœara Enim Petroleum Mij. ..	133 1/8	133 1/8	100
" 1-1,000 Oblig. 5	101 1/2	102	250-1,000
" Moesi Ilir " Petroleum Mij. ..	43	43	—
Nederl.-Rumeensche Petroleum Mij.	16 1/8	17	—
Nieuwe Ned. Petroleum Mij. And...	—	55 1/4	1,000
Oliebronnen in Hannover Mij. ..	149 3/4	139	—
" (Deb. 5 %)	98	98	—
Panolan Maatschappij Cert. ..	355	355	—
Perlak Petrol. Mij. (6 % cum. pr. A.) ..	149 1/2	147	1,000
" (Common) ..	127	124 1/4	—
Sumatra-Palembang Petroleum Mij	75 3/4	76 3/4	50
Zuid Perlak Petrol. Mij. (Pref.) ..	122 1/2	127 1/8	—

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THE OIL FIELDS OF RUSSIA AND THE RUSSIAN PETROLEUM INDUSTRY.

A Practical Handbook on the Exploration, Exploitation, and Management of Russian Oil Properties. By A. BEEBY THOMPSON, A.M.I.M.E., late Chief Engineer and Manager of the European Petroleum Co.'s Russian Oil Properties. About 500 pp., with numerous Illustrations and Plates.

London: Crosby Lockwood & Son, 7, Stationers' Hall Ct., Ludgate Hill.

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45, St. Mary Axe, LONDON, E.C.

American Office: 150, Nassau Street, New York.

The ANNUAL SUBSCRIPTION for English and Foreign readers is 26s., including Postage Single Copies, 1s.

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SATURDAY, DECEMBER 22ND, 1906.

THE USE OF HEAVY BENZINE FOR MOTORS.

CO have discussed the merits of a heavy benzine for motor car fuel a few years ago would have been equivalent to rousing much humour amongst those who have long been converted to the advantages of self-propelled traffic. Fortunately for the whole of the adherents to motoring, as well as for those who watch with continuous interest the general welfare of the petroleum industry, time has wrought changes, and the old order of ideas has given place to a new. We are all apt to judge matters and things in more or less a superficial manner, and the enthusiastic motorist who takes care to insist upon his motor spirit being not more than 715 specific gravity may be excused. His education in this matter has been of a very hurried

description; he hastily caught ideas regarding the quality of petrol that it is necessary he should use, and to these he has consistently clung until the frequent advances in the price of that article—advances that we must admit, were impossible to obviate—have caused him to look round in an earnest endeavour to find a substitute which shall act equally satisfactorily yet shall be purchased at a price compatible with his purse.

Time was when petrol—as we now recognise it—was by no means an article commanding much attention as a by-product, and hence it came about that with the rapid advance of motor traction for both pleasure and business purposes, it was poured upon the English market in ever-increasing quantities. But the demand at length exceeded the supply, and do what the large refining and marketing firms could, both in America and the Far East, it was found to be next to impossible to keep pace. As soon as the article became in general use, the screw of restrictions was placed upon petrol by the railway companies and public authorities until at the present day it is hedged about with restrictions that to the careful thinking mind must be admitted to be little less than absurd. In this connection alone, we see one of the causes that have brought about an advanced retail price, but the one chief cause that has led to the present position of affairs is the fact that the world's petrol supply falls short of the demands it has to endeavour to meet.

Thus it comes about that motorists throughout the country are at present turning their attention to divers powers which they imagine may assist them to overcome the coming crisis, and the Motor Union, to its great credit be it said, has a committee sitting in order that the motor fuel question may be thoroughly investigated. To be forewarned is, we are told, to be forearmed, and there is every reason to believe that the Motor Union's Committee is doing a most useful work in this respect—a work that might well have been taken up by the Automobile Club long ago.

So far, a number of witnesses have been called before the members of the committee to give evidence, and we have no hesitation in saying that the contentions which have been laid down by Dr. P. Dvorkovitz are such as to commend themselves not only to the average motorist, but to our readers, whose interests are so closely associated with all that appertains to the progress of the petroleum industry. As a result of a series of experiments which have not been confined to the four walls of a laboratory, Dr. Dvorkovitz has conclusively proved that the present standard by which the quality of petrol is judged by the motorist is opposed to the principles of science and practice, for specific gravity in petrol is not all that has to be considered. In fact, the mere specific gravity taken by itself is of quite secondary importance, since when the spirit once gets on the tank of the motor, the main question is at what temperature will its constituents vapourise. It is, of course, quite in accordance with all principles of common sense that, seeing that vapourisation is the all important work which the spirit

has to accomplish, it is not enough to judge a petrol by its specific gravity alone. If we take the heaviest of fractions in the benzine series, we find that they are volatile enough to evaporate in the open air without the aid of any suction or pressure, and consequently they are able to act as satisfactorily in the carburetter as the lightest petrol on the market. The merest tyro in motor mechanism is aware that should the spirit not entirely evaporate—that is, should there be any residue after evaporation has taken place—then trouble is bound to cross the path of the motorist, but from the researches of Dr. Dvorkovitz, it has been proved that the evaporation of the heavier benzines is as complete as petrol of a .690 specific gravity.

As we have said, these experiments have been conducted upon practical lines outside the laboratory, and the conclusions which were formed as the result of analytical tests have been substantiated in practice. Consequently the motor industry is now the richer by the knowledge of the fact that no matter to what extent it increases, that progress will not be hampered by a scarcity of fuel nor will that fuel be of such limited proportions in its production as to be continually subject to advances in price.

The adoption of the new order of things in the motor industry is, of course, only now a question of time, and we are sure that the petroleum industry will look anxiously forward to the advent of heavy benzine as a universal fuel for motor cars. To the petroleum industry it means much. A new branch of refining will quickly spring into being, and this part of the oil business will receive a fillip it has never before experienced. Important producing fields throughout the world which have in the past been cut off from the supply of a very light benzine for motor car purposes will be brought forward, and keen rivalry from almost all quarters of the globe in the production of the heavier grades of motor fuel will ensue. Thus not only will the motor industry appreciably benefit from the adoption of the new standard for judging the suitability of motor spirit as laid down by Dr. Dvorkovitz, but the petroleum industry too will witness the coming change with feelings of thankfulness.

TIN PLATES.

Messrs. Norton, Owen & Co., of 4, Bishopsgate Street Within, London, E.C., report under date 20th December, 1906, as follows:—

The market is quiet owing to the approaching holidays, but prices are dearer on the past fortnight and exceedingly firm. It is anticipated that there will be a sharp spurt on the turn of the year. Oil sizes to-day are quoted as under:—

1c	18½ × 14	124 sheets	110 lbs.	15/6 per box.
1c	19½ × 14	120 "	110 "	15/6 "
1c	20 × 10	225 "	156 "	22/- "

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MISCELLANEA.

GALICIAN PRODUCTION DURING OCTOBER.

The production of crude oil in Galicia in October, 1906, and the stocks at the end of the month were as under (in tons):—

Field.	Production.	Stocks on 31st Oct.
West Galicia—		
Potok	1,224	4,162
Rogi	349	1,963
Rowne	178	216
Tarnawa-Wielopole-Zagorz ..	2,020	6,000
Krosno	2,359	12,691
Other West Galician fields ..	2,210	10,415
East Galicia—		
Boryslaw-Tustanowice	50,703	349,132
Schodnica	3,340	18,125
Urycz	1,510	12,326
Mraznica	140	849
Other East Galician fields ..	1,080	1,044
Total	65,113	416,923

During October the stocks again decreased by 17,382 tons. The deliveries of crude oil from the fields during October amounted to 79,585 tons, of which 56,038 tons were at Boryslaw-Tustanowice. Fuel consumption and loss amounted to 2,909 tons, of which 2,000 tons were at Boryslaw-Tustanowice.

CONDITIONS IN THE ILLINOIS FIELD.

Now that transport facilities have been extended, it is possible that the production of the Illinois field will continue to ascend in spite of the general tendency to minimise new work during the winter. The Ohio Oil Co. has now completed its first trunk line in the field, and so in a very short time will commence handling much of the production through it. The line extends from Martinsville, Ill., to Montpelier, Indiana. A large number of tanks have been erected at Martinsville and Casey, the total capacity being nearly 5,000 tons. At the present time we learn that these tanks are already full. It is anticipated that during the winter there will be a considerable amount of test work done in the field, so that the value of various lands may be proven before the spring. It is believed that when the present wells in the field are producing at their full capacity, the daily yield will be nearly 40,000 barrels.

THE PETROLEUM TRADE OF HOLLAND.

During October only 18,653 tons of petroleum were imported into Holland, the larger part of which—17,087 tons—were imported direct from the United States, though the 1,428 tons which came from Belgium were probably of American origin. The imports from Germany were of no importance, amounting to only 51 tons. There were no imports at all from Russia in October. From the 1st of January to the end of October the imports from Russia amounted to 19,150 tons, against 47,000 tons imported in the corresponding period of 1905. The imports of petroleum products from other countries since the beginning of 1906 amounted to 2,731

tons, against 920 tons only in the corresponding period of 1905.

The total imports from the 1st of January amounted to 419,200 tons, which shews a decrease of 51,000 tons against the corresponding period of 1905. The exports in October, 1906, were about 6,000 tons less than in October, 1905—namely, 16,225 tons against 22,058 tons. Of these 16,225 tons, 9,103 tons were exported to Germany, and 7,131 tons to Belgium. In October, 1905, to Belgium there were exported only 1,372 tons, whilst Germany took 20,475 tons. From the 1st of January to October 31st, 1906, the total exports amounted to 232,692 tons, against 293,737 tons in the corresponding period of 1905. The exports to Germany were in the 10 months of 1906, 208,554 tons; and in the 10 months of 1905, 252,410 tons.

PRODUCTION OF DUTCH-INDIAN PETROLEUM COMPANIES.

The production of refined oil by the Royal Dutch Petroleum Co. in November, including the production of the Sumatra-Palembang and Moeara-Enim Companies, amounted to 828,200 units; during the first 11 months of 1906 the output was 9,193,100 units; in the whole of 1905 the company's production was only 8,476,700 units.

The Sumatra-Palembang Petroleum Co., taken separately, produced in November 35,000 units of refined oil; in the 11 months of 1906, 408,500 units; and during the whole of 1905, 574,500 units.

The Moesi-Illir Petroleum Co. has produced in November 49,000 units of illuminating oil. The total output in 1905 up to the end of November was 266,374 units. For the whole of 1905 the output was 244,902 units.

The output of refined oil by the Dordtsche Petroleum Co. in November, 1905, amounted to 164,000 cases; for the first eleven months of 1906 it was 1,807,450 cases; and for the whole of 1905 2,077,310 cases.

The Panolan Co. produced in November 55,950 cases of refined oil; in the 11 months of 1906 it produced 513,522 cases; and in 1905, 569,935 cases.

The Mine, Bush and Land Exploitation Co., of Langkat, has produced in October, 1906, 168,199 units of illuminating oil. In the first 10 months of 1906 its output was 1,780,852 units; and in the whole of 1905, 1,896,077 units.

OPERATIONS OF ROUMANIAN REFINERIES IN OCTOBER.

Below we give the official statistics of the output of deliveries and stocks of various petroleum products at the Roumanian refineries in October, 1905 (in tons):—

	Output in October.	Deliveries for home consumption in October.	Stocks on 31st October.
Benzine	10,812	48	14,641
Refined oil and distillate	17,237	5,084	48,892
Lubricating oil ..	3,913	254	23,616
Residuals	25,930	20,590	58,522
Total	58,892	25,976	145,671

LONDON OIL SHARE MARKET.

FRIDAY, DECEMBER 21ST.

Although general business on the Stock Exchange has been considerably more active than for some time past, the Oil Share Group has not, so far, participated in the revival, and we have but few alterations to record in connection with the various issues.

On Saturday, December 8th, Anglo-Russians stood to $\frac{1}{8}$, Assam Oil, $\frac{5}{8}$ - $\frac{3}{4}$, Bibi-Eybats, $\frac{3}{8}$ - $\frac{1}{2}$, Debentures 84-89, Baku Ordinary 3s. to 3s. 6d., Preference, 6s. to 7s., Californian Oilfields $5\frac{1}{4}$ - $5\frac{3}{4}$, Refineries $1\frac{1}{8}$ - $1\frac{1}{4}$, European Preference $\frac{1}{16}$ - $\frac{3}{16}$, Debentures 79-84, Russian Ordinary 11s. to 12s., Preference 11s. to 11s. 6d., Debentures 93-96, Schibaieff Ordinary 7s. to 8s.; Preference $2\frac{1}{4}$ - $2\frac{3}{4}$, Shell Transport Ordinary 29s. 6d. to 30s. 6d., Preference 9-9 $\frac{1}{2}$, and Spies $\frac{1}{3}$ $\frac{5}{2}$ - $\frac{1}{3}$ $\frac{7}{2}$.

On Monday, Californian Refineries were in request, finishing $\frac{1}{16}$ better on the day at $1\frac{5}{16}$ - $1\frac{5}{16}$, but on Tuesday Californian Oilfields weakened, losing $\frac{1}{4}$ on the day at $5\frac{1}{2}$, and this sagging continued throughout Wednesday, closing quotation shewing a further shrinkage to $4\frac{3}{4}$ - $5\frac{1}{4}$, Baku Ordinary and Russian Ordinary were also lower, the former declining 6d. at 2s. 9d. to 3s. 3d. and the latter 6d. at 10s. 6d. to 11s. 6d.

Since then business has been in a state of suspended animation, the only change occurring on Wednesday, when Spies reacted $\frac{1}{3}$ $\frac{1}{2}$ to $\frac{1}{8}$ to $\frac{1}{2}$, and the following day when Baku Ordinary and Preference both declined at 6d. at 2s. 3d. to 2s. 9d. and 4s. to 5s. respectively. At the Mid-December carry over the account to be adjusted in Miscellaneous Shares was of the smallest dimensions, but rates of interest charged were very high, Oil Shares being generally continued at 9 per cent to 10 per cent. A comparison of the making-up prices with those of the previous settlement at End-November shewed alterations to be unimportant. Anglo-Russians advanced 3d. at 1s. 3d., and Schibaieff Ordinary 6d. at $\frac{3}{8}$. On the other hand, Baku Ordinary lost 9d. at 3s. and the Preference 6d. at 5s., Russian Ordinary at 10s. 9d. were 3d. lower and Spies 6d. easier at $\frac{1}{2}$, Californian Oilfields at $5\frac{1}{4}$, Russian Preference at 11s. 3d., Schibaieff Preference at $2\frac{1}{2}$, and Shell Transport Ordinary at $1\frac{1}{2}$ remaining unchanged.

FROM BAKU TO NORTHERN RUSSIA BY WATER.

MESSRS. NOBEL BROS. PROPOSAL NEGATIVED.

A special committee, under the presidency of Mr. M. V. Langowsky, of the Ministry of Commerce, has just had under consideration the request made by Messrs. Nobel for permission to deliver kerosene from Baku to Russian Poland by an all-water route *via* Germany. This route would be from Baku *via* Caspian Sea, the Volga, the Maryinsky Canal system and the Neva to St. Petersburg; thence by tank ship to Danzig in Germany. From Danzig the oil will be carried in tank barges on the Vistula to Warsaw. Messrs. Nobel propose to ship their oil by this route, only in vessels flying the Russian flag. The adoption of this route in practice would require such an enormous outlay that only Nobel Bros. will be able to use it, though they suggest it shall be granted to all desiring it. The difference of 6 copecs per pood in the cost of transport would give Nobel Bros. a practical monopoly of the market in Poland and parts of Western Russia to the detriment of other producers, and the latter are, therefore, offering strenuous opposition to the scheme. Baku refiners are also opposed to it as tending to destroy the relative position of the various markets.

Messrs. Nobel's request was supported, apart from the firm themselves, by the representative of the Department of the Merchant Marine, and the representative of the Merchant and Manufacturers' Association. The need for a new waterway, it was argued, was created by the inadequate capacity of the railways.

After some protracted discussion the conference resolved, almost unanimously, to refuse Messrs. Nobel's request on the plea that the State railways, which are a burden to the Treasury as it is, cannot afford the loss of millions of roubles worth of traffic merely to enable Messrs. Nobel to obtain larger profits. Further, the congestion on the railways is only in the south of Russia, whilst in the north they are suffering for want of traffic. The proper solution of the problem, therefore, is to direct the oil by water to the upper reaches of the Volga and thence by rail to western Russia and Poland.

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RUSSIAN.. ANDROUMANIAN.. NOTES.

The International Company's Production.—Well No. 15 of the international Co., at Gura-Ocnitza, yields 25 to 30 tons of crude oil per day. The total production of the International Co. is now about 130 tons daily.

No Tank Waggons.—Petroleum firms have lately been experiencing great difficulty in promptly executing orders owing to the irregular working of the Riasan-Ural Railway, which does not supply tank waggons when required.

Unemployment at Baku.—In spite of the fact that the large firms have resumed work at the oil fields, there is a large number of unemployed in Baku, both skilled and unskilled. Thousands of workmen have left and are leaving Baku.

A Campina Conflagration.—Well No. 83 of the Steaua Romano, at Campina, was recently destroyed by fire, together with a crude oil reservoir of 10,000 tons capacity. Fortunately there were no victims, but the monetary loss is very great.

"Honour to Whom Honour."—Mr. Paul Desmarais, of the firm of Desmarais Freres, Paris, and founder of the Aquila Franco-Romana Co., of Roumania, has had the honour of receiving from the King of Roumania the Order of the Crown of Roumania.

Another Diesel Engine Success.—The Kolomensky Engineering Works are now building a tank steamer of 3,500 tons capacity, which is to be propelled by Diesel engines instead of steam. It is intended to carry crude oil and residuals from Baku to the Astrakhan 9 feet roadstead.

The New Roumanian Mining Law.—The new mining law recently introduced in Roumania requires that persons in charge of petroleum properties must, within a short time, learn the Roumanian language. This has now been found very inconvenient in practice, and it is proposed to modify the regulations in this respect.

To Sink Deeper Wells.—The Bana-Moreni Syndicate has resolved to sink their wells to a depth of 800 metres. The present depth of the well which Mr. Hamilton is drilling is 540 metres, and it will probably strike oil very shortly as it has already passed through the salt stratum. The stratification here is the same as in the Stavreopoles plot on which the rich wells of the Regatul Roman Co. are situated.

First Roumanian Boring Company.—Under the title of the First Roumanian Boring Co., a company has just been formed in Roumania with a capital of 750,000 francs, in which half of the shares are held by the Deutsche Tiefbohrergesellschaft. The object is to carry on boring by contract in Roumania. 75,000 shares are taken by Messrs. Wolski and Co., of Galicia, as purchase consideration for the patent rights on the Wolski boring ram.

Trial Wells at Poota.—Messrs. Nobel Bros. are drilling two trial wells near Poota station, on the Transcaucasian Railway. One of the wells No. 2, which is 980 feet deep, was last month the scene of a gas eruption of terrific force. The noise produced by the escape of the gas and the trembling of the ground gave the impression of a gigantic locomotive. Through a cause unknown, the gas soon caught fire, and for three days the district over a vast area was illuminated by a huge pillar of fire.

Tank Waggons at a Premium.—Owners of tank waggons at Nijni-Novgorod were in October offering them on the hire at 150 roubles each per annum. In July tank waggons could not be hired at Nijni or Moscow at less than 170 roubles, whilst in Saratoff they could not be got under 190 roubles per annum. Towards the end of October there were on the market offers of tank waggons at 130 to 140 roubles per annum, payment by six and nine months' bills. These tank waggons have a capacity of 840 poods.

A Bustenari Spouter.—A well of the Steaua Romana, at Bustenari, near the property of the Colombia Co., has commenced to spout yielding 100 tons of crude oil daily.

Productive Moreni.—The total production of the Regatul Roman Co. at Moreni is now between 600 and 650 tons per day. Well No. 22, belonging to the company at Moreni, on State land, is yielding 150 tons daily. The Romano-American Co. are also getting from one of their wells in this field 70 or 80 tons per day.

A Remarkable Step.—The Russian Ministry of Communications have decided to increase the charge levied on all kerosene forwarded from Baku, to cover the expenses of the waggon allotment committee, from $\frac{1}{30}$ to $\frac{1}{15}$ copek per pood. The reason for this is that owing to the continuance of the crisis in the kerosene trade the receipts from this source have not been sufficient to cover the expenses.

The Close of Navigation.—Navigation on the Volga has ceased, and fortunately all the oil shipments on the way were delivered to their respective destinations. On the Caspian Sea, shipments from Baku to Astrakhan have ceased, but shipments will continue on a large scale during the winter to Petrovsk, whence the oil will be forwarded to the interior over the Vladicaucasian Railway.

To Operate in Roumania.—The *Moniteur du Petrole Roumain* states that the Royal Dutch Co. are about to form in Holland an independent company, probably under the title of Consolidaten Rumeensche Petroleum Maatschappij, with a capital of 12,000,000 florins, for the purpose of engaging in the Roumanian petroleum industry. At present the Royal Dutch Co. is represented in Roumania by Messrs. Pleyte and Co.

The Russian Naphtha Co. has published the results of its operations in 1905. The company owns freehold plots at Balakhany, Ramany, Saboontchi, and holds certain plots on lease from the Eaku Co. It has 37 boreholes, also a refinery at Baku. The capital is 3,408,750 roubles. During the tenth financial year the company has lost 1,100,296 roubles. The loss from last year's fires and riots amounted to 1,364,336 roubles.

The Romano-American Company.—On November 10th there took place at Bucarest the general meeting of the Romano-American Co., at which ordinary business was transacted. At a meeting of directors of the same company, held subsequently, Messrs. H. P. Chamberlain and W. M. Page were appointed managing directors, with power to manage and dispose of the company's business as they deem best.

Machine Oil Contract.—The Moscow-Brest Railway has recently given out a contract for the supply of machine oil for a year. Tenders were submitted by the following firms:—Russo-American Co., 1 rouble 95 copecs per pood; Mazout Co., 2 roubles; Ter Akopoff, 2.05 roubles; Nobel Bros., 2.10 roubles; Ragosine and Co., 2.15 roubles. All these prices were for delivery in bulk at Moscow. The contract was secured by the Russo-American Co., who have their works at Kuskovo station, in the Moscow district.

The Transformation of the Telega Oil Company into a Roumanian company, under the title of Sylva Co., is about to be carried out. It will be remembered that under the arrangement between the holders of the shares of the Telega Oil Co. and the financial group interested in the Italo-Roumanian Co. the capital of the first named company was reduced from 10,000,000 francs to 8,500,000 francs, whereupon a fresh issue of 2,000,000 francs of shares was made, which were taken up by the Italian group, so that the Sylva Co. will have a capital of 10,500,000 francs. The management both of the commercial and technical parts will remain in the hands of the Disconto group.

THE HOME OFFICE AND PETROLEUM "DANGERS."

THE FLASH POINT FALLACY AGAIN.

Mr. H. Gladstone, the Home Secretary, last week received at the Home Office a deputation from the London County Council, who called attention to the "dangers" attending the use and storage of petroleum, and asking for an amendment of the Petroleum Act at an early date. Mr. Greenwood, vice-chairman of the Central Committee, said that the Act did not place sufficient restriction on the private use of petroleum. The public regarded the public conveyance of petroleum as a serious menace to public safety. He referred also to the great dangers resulting from the discharges from motor garages and similar places of petroleum into the sewers. This evil, he said, had become so serious that the Council might have to consider whether it would not be justified in inserting in licenses that the proprietors of motor garages should construct intercepting chambers.

On the question of the flash point of oil, the County Council considered that oil under 100° F. ought to be placed under control.

The Home Secretary, in the course of his reply, said that there had been a strong case made for dealing with the subject of the conveyance of petroleum, for it was quite obvious that the conveyance of petroleum had enormously increased, and would continue to increase, and that therefore they were exposed to new or greater risks than before. The last point raised with regard to the flash-point was admittedly an important question, but he thought everybody would agree that from the point of view of legislation it was an extremely difficult matter. They asked for legislation "at an early date."

If all the departments in the Government gave to the Home Department a clear field for two whole sessions they would not be able to work off, or anything like work off, legislation which they were pressed to take in hand. Until they saw some daylight he thought it would be very rash to promise legislation at an early date. That "early date" had a habit of never arriving. All he could say was that they would look very carefully into the points raised.

THE AUSTRALIAN SHALE SYNDICATE, LTD.

The annual report of the above company, which has just been issued, states that a new company has just been formed for the purpose of leasing large areas of oil or second-class shale in New South Wales. Exploration work on the Murrurundi property has proved a continuous line of the outcrop of the shale seam by shallow shafts for a distance over a mile. The consulting engineers report that, in their opinion, the small portion which has already been proved contains 500,000 tons of first quality or export shale, and over 2,000,000 tons of second-class or oil shale. The area of the leasehold is 959 acres, and the company is exercising its option on 7,000 acres adjoining. It is estimated that it will not cost more than £1 per ton to place export shale from Murrurundi, f.o.b. Newcastle, N.S.W., and, as the present market price is from 40s. to 45s. per ton, the profit derivable from the export shale alone should be very great. The second-class, or oil shale, when it comes to be treated, should also produce a large profit. As regards the Genowlan leasehold, the consulting engineers state that there is at present proved in the old area of the leasehold upwards of 80,000 tons of shale, and nearly one-fifth of this is of sufficiently high standard to be disposed of as export shale. It is now necessary that sufficient working capital should be provided for the work contemplated on both properties, which includes the construction of a tramway and thoroughly equipping the works, so as to produce an output up to 500 tons of export shale per day. The directors have therefore decided to create first mortgage debenture stock for £25,000, which it is estimated will be sufficient for present requirements. No dividend is to be declared upon the shares of the syndicate until all the stock has been redeemed or converted into shares. There are at present 10,000 unissued shares, and the directors recommend that steps be immediately taken to increase the capital by 15,000 additional shares.

THE British Empire Motor Trades Alliance, Ltd., has received an enquiry from a Spanish port, for a 30 horse-power motor omnibus to carry 16 passengers, and a 30 horse-power motor vehicle for cargo.

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The Petroleums of North America.

By Mr. CLIFFORD RICHARDSON.

Being a Comprehensive Account of the Constituents of American Petroleum.

(Continued from page 324.)

The oil resembles that from the Summerland field and leaves on distillation a large percentage of asphaltic residue. Treatment of the lower distillates with sodium hydrates and acid removes but a comparatively small percentage of nitrogenous bases, sulphur derivatives and unsaturated hydrocarbons. When two hundred c.c. is distilled from an Engler distilling flask, the following percentages of distillate are obtained:—

	Per Cent.
Under 200°	0.0
200-250	4.0
150-300	13.9

Cracking begins at temperatures much above 300 degrees, and strong smelling distillates, amounting to 50 per cent, may be obtained, leaving a residue of 30 to 40 per cent. of pitch, according to the care with which and the extent to which the distillation has been carried out. That a much larger percentage of pitch than this is obtained, was found to be the case by the writer if the oil is allowed to evaporate in an open dish at from 12 to 24 hours, at a temperature of 200 degrees, when as much as 60 per cent. will be obtained. In the actual distillation of such oils in the refineries the temperatures are often carried to 400 degrees, or even higher, both distillate and residual pitch being much decomposed. The residual oils and pitches obtained in this way, when the greatest care is exercised in distillation, have the following composition:—

CALIFORNIA RESIDUAL OIL.

("G" Grade.)

PHYSICAL PROPERTIES.

Specific gravity, 25/25°	1.006
Flash	191°

CHEMICAL CHARACTERISTICS.

Loss 160°, 7 hours	3.2%
Character of residue	Soft.
Loss, 200°, 7 hours	17.8%
Character of residue	Soft.
Bitumen soluble in CS ₂ , air temperature	99.7%
Per cent. of soluble bitumen removed by H ₂ SO ₄	41.9
Per cent. solid paraffins	0.0%
Fixed carbon	6.0%

CALIFORNIA RESIDUAL PITCH.

("D" Grade.)

PHYSICAL PROPERTIES.

Specific gravity 25/25°	1.052
Colour of powder or streak	Black
Lustre	Lustrous
Structure	Uniform
Fracture	Tacky
Hardness, original substance	Sticky
Odour	Asphaltic
Softens	61°
Flows	69°
Penetration at 25°	52

CHEMICAL CHARACTERISTICS.

Loss 160°, 7 hours	83%
Character of Residue	Hard
Loss 200°, 7 hours (fresh sample)	6.2%
Character of Residue	Hard
Bitumen soluble in CS ₂ , air temperature	99.3%
Organic matter insoluble	4
Inorganic or mineral matter	3

Malthenes:—

Bitumen soluble in 88° B. naphtha, air temperature	77.0%
This is per cent. of total bitumen	77.5
Per cent. of soluble bitumen as removed by H ₂ SO ₄	47.8
Per cent. of total bitumen as saturated hydrocarbons	40.5
Bitumen soluble in 62° B. naphtha	82.2%
This is per cent. of total bitumen	80.0

Carbenes:—

Per cent. of bitumen insoluble in carbon tetrachloride, air temperature	5%
Fixed carbon	15.0%

Residuals like the above are known as California flux and California asphalt, and have been used more or less satisfactorily in the construction of asphalt pavement. They are free from paraffin scale and are distinguished from similar residues from paraffin petroleum by yielding a much higher percentage of fixed carbon, the amount being proportionate to the hardness of the material.

Los Angeles County.

Petroleum from the Southern part of Los Angeles county, in the Peunte Hills, and the adjoining fields in Orange county is quite variable in character. Some of it has a density as high as .8537, 34.0 degrees B., in the Olinda fields, while other oil from the same field has a density of .9396, 19.0 degrees B. The lighter oil affords the following percentages of distillates, according to Cooper:—

	Per Cent.
Under 100°	12.9
100-150	15.3
150-200	11.5
200-250	11.1
250-300	9.6
Residue	39.6

100.0

One of the denser oils has been examined by the writer with the following results:—

OIL FROM THE FULLERTON OIL WELLS OF THE A.T. & S.F.R.R.

Colour	Brown
Specific gravity 20/20° .. .. .	.9393
Beaume	19.5°
Loss 200°, 7 hours	42.7
Character of residue	Soft, maltha, sticky and drawing to a long thread.

Flash					26°
Boiling point.					
Atmospheric pressure.	Colour of Distillate.	Per Cent. Distilled.	Sp. Gr. 25/25°	Ref. Index.	
35-135°	Colourless	2.4	.7880	1.423	
135-175	Pink ..	8.2	.8319	1.435	
25 mm. pressure.					
40-100°	Green ..	4.2	.8745	1.455	
100-150	Dark red..	10.4	.9195	1.478	
153-165	Dark red..	7.0	.9547	1.496	
Begins to crack—					
Residue .. .. .	.. .. .	66.4	—	—	
Loss, gas .. .. .	.. .. .	1.4	—	—	

100.0

The preceding distillates, when treated with sodium hydrate solution and sulphuric acid, lost the following percentages of phenols and bases:—

Boiling point.	Per Cent. Distillate.	Loss with 10 per cent. Soda.	Loss with Concentrated Acid.
Atmospheric pressure.			
35-135°	2.4	0.0	0.7
135-175	8.2	1.2	1.3
25 mm. pressure.			
40-100°	4.2	2.3	4.7
100-150	10.4	2.9	4.9
150-165	7.0	6.8	13.3
Residue	66.4	8.7	33.3

DENSITY OF DISTILLATES BEFORE AND AFTER TREATMENT.

Boiling point.	Density. Before.	Density. After.	Refractive Index. Before.	Refractive Index. After.
Atmospheric pressure.				
35-135° .. .. .	.7880	.7338	1.423	1.430
135-150 .. .. .	.8319	.7798	1.435	1.437
25 mm. pressure.				
40-100° .. .. .	.8745	.8169	1.455	1.454
100-150 .. .. .	.9195	.8593	1.478	1.477
150-165 .. .. .	.9547	.8774	1.496	1.494
Residue	—	.8975	—	—

Both of these substances can be recovered, the phenols at times in crystalline condition. The bases are the same as those found in other California oils, while they are accompanied by some aromatic hydrocarbons and sulphur derivatives, the oil carrying 28 per cent. of sulphur.

Ventura County.

Ventura county is the location from which the earliest supplies of California petroleum were obtained as long ago as the sixties. The fields are scattered through its southern part, on both sides of the Santa Clara Valley and in the neighbourhood of Santa Paula. The oils are of the most varied character, ranging from a very dense one carrying a large percentage of nitrogen and sulphur, in the Ojai district, to the lighter oil of the Bardsdale and Torrey fields, from the distillates of which solid hydrocarbons separate at ordinary temperatures. These oils have been examined by the writer, with the following results:—

OIL FROM OJAI VALLEY.					
Fraction.	Per Cent. Distilled.		NaOH	Loss with H ₂ SO ₄ .	
Original Oil..	—	..	—	..	—
30- 80°	.. 7·8	..	2·1	..	3·3
80-118	.. 7·8	..	3·3	..	4·4
118-150	.. 7·8	..	4·0	..	8·5
150-181	.. 8·0	..	11·1	..	9·0
181-213	.. 8·0	..	12·7	..	10·5
213-248	.. 8·0	..	13·9	..	12·7
248-274	.. 7·8	..	2·1	..	16·3
Residue	.. 43·8	..	—	..	—
Loss ...	.. 1·0	..	—	..	—
Fraction.	Specific gravity.		Refractive Index.		
	Before	After	Before	After	
Original Oil .	·9175	—	—	—	—
30- 80°	.. ·7680	·7826	1·435	1·437	
80-118	.. ·7728	·8200	1·455	1·455	
118-150	.. ·8334	·8583	1·478	1·476	
150-181	.. ·8750	·8907	1·498	1·495	
181-213	.. ·8939	·9079	1·512	1·506	
213-248	.. ·9292	·9257	1·526	1·516	
248-274	.. ·9605	·9394	1·537	1·517	
Residue	.. 1·0100	—	—	—	
Loss —	—	—	—	

This oil is marked by the fact that 11, 12 and 14 per cent. of the distillates boiling between 150 and 250 degrees, at 26 mm., consist of phenoloid bodies removed by treatment with sodium hydrate, while an almost equal amount of nitrogenous bases are removed by sulphuric acid. The changes in the specific gravity of the distillates after treatment is striking, the result being an increase in some and decrease in others.

BARSDALE OIL.				
Before treatment.				
Fraction.	Per cent. distilled.	Colour.	Sp. Gr. 20°	Refrac. Index.
Original	—	Deep brown-black	.8869*	—
62-120°	10.0	Colourless	.7316	1.414
120-154	12.0	Colourless	.7481	1.419
26 mm. Pressure.				
48-116°	13.0	Light yellow	.7972	1.443
116-152	12.0	Light green	.8420	1.469
152-198	11.0	Darker green	.8724	1.486
198-255†	10.0	Yellow-brown	.9035†	1.501
255-310‡	6.0	Reddish-brown	.9216**	1.521
Residue	25.4	Penetration about 60.	—	—

* 29° B. † Little paraffin. ‡ At 25°.
 † Solid with paraffin. ** At 45°.

After treatment.					
Fraction.	Colour.	Loss with NaOH.	Loss with H ₂ SO ₄ .	Sp. Gr.	Refrac. Index.
62-120°	Colourless..	1.1%	1.7%	.7387	1.420
120-154	Colourless..	1.4	3.8	.7493	1.420
26 mm. pressure.					
48-116°	Colourless..	1.0	5.3	.7932	1.441
116-152	Colourless..	0.9	9.0	.8330	1.463
152-198	Light yellow	1.9	16.3*	.8572	1.478
198-255	Light yellow	1.6	18.7†	.8900	1.498
255-310	Red. brown.	1.3	34.7	.9001	1.510

* Melts at 25°. † Melts at 43°.

The preceding distillates, obtained at a pressure of 26 mm., with the exception of the two lower fractions, have a very much lower density than those of the denser California petroleum. The distillates at atmospheric pressure below 150 degrees amount to 22 per cent. The fractions above 200 per cent. at 26 mm., all separate solid hydrocarbons which have not been closely identified. Mabery has examined a similar oil from the adjoining Torrey Canyon field, and isolated from the distillates

solid hydrocarbons in crystals that melt at 57 degrees to 62 degrees, and which are not paraffins. He also found that this carried quite an amount of sulphur, .84 per cent., and a very considerable percentage of nitrogen. The crude oil has the following composition:—

	Per cent.
Carbon	85.60
Hydrogen	12.84

In the lower distillates benzol and toluol were present in market amount, and the density of these distillates was much higher than would make it possible for the occurrence of C_nH_{3n+2} hydrocarbons, and it seems, therefore, from Mabery's examination, that none of these exist and that the lower boiling components of this oil are aromatic and naphthene hydrocarbons.

The writer has also examined a specimen of the Torrey Canyon oil, with the following results:—

TORREY CANYON OIL.					
Before Treatment.					
Fraction.	Per cent. Distilled.	Colour.	Sp. gr.	Refrac. Index.	
Original oil	—	Dark reddish-brown	.8650	—	
Atmospheric Pressure.					
47-116°	6.0	Colourless	.7200	1.412	
116-145°	12.4	Colourless	.7523	1.428	
26 mm. Pressure.					
36-94°	12.7	Very light yellow	.7912	1.440	
94-132	14.0	Very light yellow	.8255	1.458	
132-195*	17.6	Yellow	.8520	1.475	
195-242†	15.0	Greenish	.8808	1.491	
242-280‡	15.0	Dark yellow	.8981§	1.504	
280-310**	6.2	Dark brown-reddish	.9156	1.523	
Loss ..	98.9				
Residue ..	1.1				

Residue, 24.6 per cent. is a hard asphalt with appearance of paraffin.

* Some solid hydrocarbons.

† Considerable solid hydrocarbons.

‡ Solid hydrocarbons.

§ Solid hydrocarbons. ** 40°.

After Treatment.						
Fractions.	Colour.	Loss with NaOH	Loss with H ₂ SO ₄ .	Sp. Gr.	Refrac. Index	Melts at
47-116°	Colourless*	—	2.5%	.7232	1.418	—
116-148	Colourless	—	2.8	.7542	1.424	—
26 mm. Pressure.						
36-94°	Colourless	—	5.1	.7903	1.471	—
94-132	Colourless	0.5	7.0	.8236	1.459	—
132-195	Light yellow	1.9	13.0	.8423	1.461	—
195-242	Light yellow	2.2	15.2	.8528	1.482	—
242-280	Yellow	1.1	21.7	.8733	1.497	30°
280-310	Yellow	1.4	24.2	.8878	1.504	36°

The gravity of the higher distillates in both the Bardswell and Torrey Canyon oils is much less than in the usual asphaltic oils, and this, as has been said, is a very distinguishing character of these petroleum. For example, the distillates of the same boiling point in the Los Angeles, Torrey Canyon, and Bardswell oils compare as follows:—

	Los Angeles	Bardsdale.	Torrey Canyon.
Boiling point 30 mm.	293-296°	255-310°	280-310°
Specific gravity	.9796	.9216	.3878
Refractive index	1.536	1.521	1.504

The Torrey Canyon oil carries a very considerably larger amount of solid hydrocarbons than the Bardsdale, and the distillates are of much lower density and refractive index for the same boiling point. From a scientific point of view, it is one of the most interesting petroleum of California, and will eventually repay careful study.

The Torrey Canyon and Bardsdale oils differ most strikingly from that from the Ojai Valley by their lesser density, the presence of solid hydrocarbons and the absence of any considerable amounts of phenoloid bodies removed by sodium hydrate.

(To be continued.)

American Oil Notes.



The United States Production.—The total production of the oil fields of the United States at the present time is estimated at about 395,000 barrels per day.

A Real Gusher.—One of the wells belonging to the Union Oil Co. of California, and situated in the Santa Maria field has, since it began gushing, produced about 2,000,000 barrels of oil.

Oil versus Coal.—Oil for use as liquid fuel is now being shipped from California to British Columbia, and is there successfully competing with coal within a distance of fifty miles of the great collieries.

Railroad Company Drills Wells.—In order to make itself secure from oil price fluctuations, the Southern Pacific Railroad has appropriated money sufficient to drill 7 wells in California and five in Texas during the fiscal year.

At Sulphur Springs.—It is reported that a test well is being put down at Sulphur Springs, a locality which has been referred to on more than one occasion in the REVIEW. The exact location of this district is about four miles north of Groesbeck, Texas.

Pipe Line Company Increases.—The Crescent Pipe Line Co., of Philadelphia, has recently increased its capital stock from \$1,000,000 to \$4,000,000; the Southern Pipe Line Co. from \$5,000,000 to \$10,000,000; and the Northern Pipe Line Co., of Oil City, from \$1,000,000 to \$4,000,000. Evidently there is a boom in pipe lines just now.

The Graciosa Oil Company.—The Graciosa Oil Co., of California, has purchased a new tank steamer for its coast trade from the J. M. McDuffer Oil Co., of New York. The vessel is 307 feet long, 36 feet broad, and has a capacity for between three and four thousand tons. We gather that this company's refinery at Oilport is progressing satisfactorily.

The Salt Lake Field.—This field is now claiming much attention on the part of Californian operators. Rigs are going up in a northerly direction, and the idea seems to extend the field in this direction as quickly as possible. The Murphy Oil Co., operating in this field is said to have paid \$30 per acre for territory which will now command \$2,000 per acre at least.

The Coalinga Pacific Company.—Some months ago a correspondent enquired of us re the Coalinga Pacific Oil Co. We are now informed by our representative in the Californian fields that all the company's wells are producing oil in commercial quantities, the total production having recently been augmented owing to well No. 4 producing large quantities of oil. The company's production is therefore now greater than it has ever been in the past.

Another Promising Canadian Field.—A communication from Chatham states that a new and promising oil field has been opened up in the township of Raleigh. On November 29th oil was struck in the well which was being drilled on a lease secured by a Mrs. Finn. This well is three miles east of any other paying well and is the farthest north of any of the wells in the Tilbury or Raleigh fields. The new strike is awakening considerable interest.

To Transport Californian Oil.—A new company entitled the Coast Oil Transport Co. has recently been formed in San Francisco for the purpose of constructing oil and gas pipe lines in Santa Barbara and San Luis Obispo counties. The lines, which will be about 50 miles long will begin at Harris station on the Pacific Coast Railway in Santa Barbara and extend northward to Port Harford, thence westward to Casmalia on the Southern Pacific Railroad.

New Californian Pipe Lines.—The Coast Oil Transportation Co. (Graciosa-California Petroleum Refineries, Ltd.), is now laying a pipe line from the Santa Maria field to Oilport which, when completed, will take care of the output of the Graciosa company's output. This line will in all probability be completed next month. The Union Oil Co. is also about to lay another pipe line to take care of some of its production, while the Associated Co. may build a larger line to San Luis Bay in the near future.

Oil Stocks.—The greatest stocks ever held in waiting for a market are now said to be in the Mid-Continent fields where at the present time no less than 21,000,000 barrels are held.

From Coalinga.—An occasional correspondent of the REVIEW, writing from Coalinga, states that there are about 263 wells in the fields now producing, and their daily yield is about 17,000 barrels.

Good Oil Strike at Arroyo Grande.—The Associated Oil Co. is said to have reached a depth of 2,000 feet in one of its wells in the Arroyo Grande field, San Luis Obispo county, and has encountered a good body of oil formation, which already assures the company of a good producer. The oil is very heavy, being adapted only for fuel purposes.

Kern County Production.—One of the correspondents to the *Pacific Oil Reporter* states that it is estimated that the Kern county field is now producing about 35,000 barrels daily. The refineries are working full capacity, and the demand for the various by-products and asphalt which until a year ago was a drag on the market, now exceeds the present capacity of the refineries.

Au Revoir Batson.—The Batson field which shewed up so well a year or so ago, and wherein many companies operated with great success, appears to have fallen upon evil days. Its production is declining, and operators are bidding the prairie adieu in search of better spots elsewhere. The latest company to leave has been the Texas Co., its field equipment having just been taken away.

The Heywood Company's Dividend.—The *Oil Investors' Journal* learns that the coming dividend to the stockholders of the Heywood Oil Co. will be \$10 per share. The value of the shares is \$100 each, and the dividend now to be declared will bring the total paid this year up to 21 per cent. During the five years of its existence the company has paid over 60 per cent. in dividends, so with the present dividend the shareholders will have received over 70 per cent. from their holdings.

Illinois Leases Secured.—The Heywood Oil Co. has secured some very attractive leases in the Illinois field, the President having spent a few days there in November, when arrangements were made for acquiring about 700 acres in Lawrence and Crawford counties. Those in the former county look very good, inasmuch as a test well upon adjoining property has been brought in a good producer. It is stated that the Heywood Co. may possibly acquire some land in the Indian Territory.

The Santa Maria Field.—We gather from the staff correspondent of the *Pacific Oil Reporter* that in the Santa Maria field the production of the Union Oil Co., of California, is estimated at close upon 10,000 barrels daily, this quantity being apart from the deliveries made via the narrow gauge railway. The company's pipe line to Port Harford is taxed to its fullest capacity, and the line is now quite inadequate to meet the requirements. The second line, however, will soon be completed, and this will take care of the surplus.

The Recruit Oil Co.—The Recruit Oil Co., a subsidiary concern of the Associated Oil Co. has encountered a rich oil stratum upon the Escolle lease in the Santa Maria field of California. The well has reached a depth of 2,700 feet. This company, by-the-by, owns a very large area of land in the Santa Maria field, and on the Lompoc anticline, the southern part of the field. Practical tests have proven the greater part of it to be oil bearing, and extensive development will doubtless be shortly carried out.

The Sunset and Midway Fields.—Producers in the Sunset and Midway fields of California are grumbling very much at present owing to having to shut down the majority of their wells in consequence of being unable to obtain the necessary cars from the railway companies in which to transport their oil. Many small producers desire to see a law similar to the one in Texas which compels the transportation companies to furnish as many cars as may be ordered under a penalty of \$25 per day for each car demanded and not furnished.

BAKU - RUSSIAN PETROLEUM COMPANY, LIMITED.

ISSUE OF SECOND DEBENTURES.

The directors of the Baku Russian Petroleum Co., Ltd., are about to issue second debentures upon the company's property, the proposal being contained in a circular dated December 19th. In this circular the directors state that they have been doing their utmost during the last year to restore and develop the company's property at Baku so as to increase the production and place the company on a dividend paying basis. A large number of new wells are now on the boring list, several of which are nearing completion. Owing to the heavy expenditure connected with the re-instatement of the property after the fires and strikes, together with the cost of carrying out the boring programme, the financial obligations have increased. In order to carry on the business, and to preserve the shareholders' property, fresh funds are urgently needed. It is necessary, therefore, they state, to apply to the shareholders to provide further capital, and with this object the directors ask the shareholders to subscribe to an issue of £150,000 eight per cent. second debentures at £90 per cent., redeemable at par, upon the company giving three months' notice, or by annual drawings of one-tenth in each year, with power to the company to purchase in the open market in lieu of drawings.

The issue of £150,000 second debentures will constitute a floating charge on the whole of the undertaking, property and uncalled capital of the company, subject to a charge now existing in respect of £143,100 first debentures and to any prior rights of the creditors in Russia as constituted under Russian law, and to a charge of £40,000 secured on the stores, materials, loose plant and machinery. The second debenture trust deed will provide that no further debentures, mortgages or charges in priority thereto or ranking *pari passu* therewith shall be issued except with the consent of three-fourths of the second debenture holders present at a meeting specially convened and at which upwards of one-half the second debentures outstanding are to be represented.

The City Safe Deposits and Agency Co., Ltd., are to act as trustees for the second debenture holders.

THE RE-ORGANISED PETROLEA COMPANY OF GALICIA.

LATEST DETAILS.

At a meeting of petroleum producers held at Drohobycz on the 2nd of December, the position in regard to the newly re-organised Petrolea Co. was discussed. In view of the fact that there is still a considerable number of producing firms who have not yet signed the agreement with the Petrolea, a committee was elected consisting of Dr. H. Feuerstein, Count Zamoyski, Mr. W. Wolski, Mr. I. Feuerstein, Dr. Steczkowski, Dr. Fraenkel and Mr. Malczewski to negotiate with the outsiders and induce them to join the Petrolea. If, by the 24th of December, not all of the firms who were formerly in the Petrolea will have joined the new agreement, the Petrolea is urged to take strong action against the "outsiders."

PRODUCTION OF ENGLISH COMPANIES IN RUSSIA.

BAKU RUSSIAN PETROLEUM Co., LTD.—The production for the week ended 8th December was 250,000 poods, or 4,030 tons; and for the week ended 15th December 255,000 poods or 4,111 tons.

RUSSIAN PETROLEUM AND LIQUID FUEL Co., LTD.—The production for the week ended December 9th was 298,000 poods, or 4,804 tons; and for the week ended 16th December, 308,000 poods, or 4,965 tons.

SPIES PETROLEUM Co., LTD.—The output for the week ended 9th December was 117,720 poods, or 1,898 tons; and for the week ended 16th December, 122,350 poods, or 1,976 tons.

THE EUROPEAN PETROLEUM Co., LTD.—The production for the week ended 9th December was 150,797 poods, or 2,431 tons; and for the week ended 16th December was 151,498 poods, or 2,442 tons.

THE Sirdar Rubber Co., Ltd., has received another order for Royal Sirdar buffer tyres for His Royal Highness the Prince of Wales.

A German Consular report states that there would be a good market at Christiansund for engines for fishing boats, pilot steamers, and small cargo boats. The engines sold so far have been imported from America. As very few engines are made in Norway itself, the de is one which offers a good prospect for exporters to Norway.

CLASSIFIED IMPORTS INTO UNITED KINGDOM UP TO DECEMBER 17th, 1906.

IN GALLONS.

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COUNTRY.	ILLUMINATING.		LUBRICATING.		RESIDUALS.		GAS OIL. (Solar)		BENZINE.		FUEL OIL.		OTHER DESCRIPTIONS.		TOTALS.	
	Since Dec. 3.	From Jan. 1.	Since Dec. 3.	From Jan. 1.	Since Dec. 3.	From Jan. 1.	Since Dec. 3.	From Jan. 1.	Since Dec. 3.	From Jan. 1.	Since Dec. 3.	From Jan. 1.	Since Dec. 3.	From Jan. 1.	Since Dec. 3.	From Jan. 1.
Austria ...	—	2,118,640	14,000	408,930	16,800	112,730	—	—	—	—	—	—	—	—	30,800	2,651,300
Belgium ...	—	67,570	17,990	488,208	—	11,000	—	—	—	5,300	—	—	250	5,617	18,240	566,695
Canada ...	—	—	—	47,460	—	56,400	—	—	—	—	—	—	—	200	—	104,060
Dutch India ...	—	480	—	960	—	192	—	—	—	14,170,230	—	1,693,010	—	1,920	—	15,866,792
Germany ...	4,360	7,655,660	86,770	1,402,493	—	—	—	—	—	2,380	—	—	400	17,562	91,530	9,079,175
Holland ...	—	10,180	4,080	7,690	—	9,440	—	—	28,000	1,514,623	—	271,000	5,200	95,880	37,280	1,916,533
Roumania ...	—	6,757,945	—	—	—	683,080	—	4,345,970	—	1,892,460	—	125,660	—	—	—	13,805,115
Russia ...	—	29,174,420	4,880	5,028,831	—	—	—	3,731,473	1,200	7,410	—	—	—	13,760	6,080	37,955,894
U.S.A. ...	2,851,720	91,275,975	1,477,640	41,294,781	—	670,968	1,003,950	43,383,808	—	7,490,120	404,230	9,476,660	41,250	1,865,534	5,778,790	195,647,756
Other Countries	—	1,655	2,330	36,782	—	—	—	—	—	4,130	—	3,840	—	217,550	2,330	263,957
	2,856,080	137,062,525	1,607,690	48,716,135	16,800	1,543,810	1,003,950	51,461,251	29,200	25,086,653	404,230	11,570,170	47,100	2,218,023	5,965,050	277,857,277

The American Oil Market.

New York, Week ended Dec. 1st.

Reports from the oil fields note good strikes in the shallow sand, but light producers continue to be the rule in the lower south-west and south-eastern fields. Very few districts are presenting wells that shew an initial production of over 100 barrels a day and the best producers are found in the lower south-east located on Dry Run, Tyler county. Operations in most districts have been suspended for the year and wells drilling and starting are confined to the old fields, and when completed, same will not attract special attention, unless larger producers are brought forth. Prospecting new fields seems to have narrowed down, owing to the constant failures encountered, serving to direct the attention of producers on old territory, where only light wells are in prospect. The discovery of new pools continues to furnish a large amount of new work, says the *Oil, Paint and Drug Reporter*, but thus far few have been profitable. In Illinois heavy rains continue to cripple field developments. Five days of a steady downpour of rain has made the highways in the Illinois oil field practically impassable. The high waters placed a number of the railroads out of commission. A heavy wind storm was general over Illinois, Indiana and Ohio, and hundreds of oil derricks are nothing but wreckage. Power houses and telegraph lines are also heavily damaged. The wind was the worst experienced in the state for many years. In the Mid-Continent oil fields conditions governing the situation are favourable, inasmuch as the shipments shew a further increase. For the first three weeks of November the shipments have been only about 5,000 barrels less than the runs, which indicates the smallest gain in stocks for the same time of two years past. The total runs from November 1st to 21st were 1,335,200 barrels, and the deliveries 1,230,000 barrels, leaving about 105,000 barrels to go into tanks for storage. There were fewer completions and drillings of wells for November than in October. In Texas large pipe line enterprises are reported, with extra heavy capitalisation behind it. Construction work on this pipe line is to begin on or about January 1st, 1907. The pipe line is to run from Tulsa, I.T., to Houston, Texas. Conditions governing the oil fields remain unchanged. Quotations for Texas oil are:—Batson 52 to 60c., as to gravity; Humble, 65c.; Jennings, 58c.; Saratoga, 60c.; Spindle Top, 68c.; Sour Lake, 50 to 64c., as to gravity.

REFINED AND PRODUCTS.—There has been a light demand for refined for export during the past week due in part to the holiday, but there are expectations of an improvement in the near future. The engagements during the week in the local market amounted to about 160,000 barrels.

The price for barrelled oil for export remains unchanged, and the market is quoted at 7.50c. for New York loading, and 7.45c. for Philadelphia loading. The principal foreign markets report no changes. Freight rates are steady at 2s. 2d. @ 3s. 0d. hence to London, and 2s. 3d. @ 3s. 0d. to Continental ports, as to port and vessel.

Cases for export have been in light demand, and sales amounted to over 165,000 cases. The price of plain tops remained steady at 10c. Freight rates are firm.

Crude for export remained inanimate, and no sales have been reported worthy of mention. Pennsylvania crude closed at 7.50c. in barrels. Cases for export have been quiet, and no sales have been reported.

Naphthas remain steady. For export, no sales have been reported.

CLOSING QUOTATIONS.

	CRUDE.	Week ended	
		Nov. 17. 1906.	Dec. 1. 1906.
National Tran. Certificates	per bbl.	\$1.58 @ 1.59	\$1.58 @ 1.59
Pennsylvania crude in bbls.	per gal.	7.60	7.60
Pennsylvania crude in bulk	.. ..	4.50	4.50
Residuum, bbls. for export	.. ..	6 @ 6½	6 @ 6½

CRUDE AT THE WELLS.

The quotations for oil represented by credit balances were:—

		Week ended	
		Dec. 1. 1905.	Dec. 1. 1906.
Tiona .. ..	.. ..	1.68	1.68
Pennsylvania .. ..	.. ..	1.58	1.58
North Lima .. ..	.. ..	0.94	0.90
South Lima .. ..	.. ..	0.89	0.85
Indiana .. ..	.. ..	0.89	0.85
CANADIAN OIL:			
Petrolia .. ..	.. ..	1.34	1.30

REFINED—FOR EXPORT.

		Week ended	
		Nov. 17. 1906.	Dec. 1. 1906.
Cargo Lots for export..	per gal. ..	7.50	7.50
In bulk .. ..	.. ..	4.40	4.40
Philadelphia loading ..	.. ..	7.45	7.45

REFINED IN CASES—110 FIRE TEST.

		Week ended	
		Nov. 17. 1906.	Dec. 1. 1906.
3,000 to 10,000..	.. ..	10.05	10.15
1,000 to 3,000..	.. ..	10.20	10.20

REFINED—JOBGING LOTS.

In barrels, pkgs. included.

		Week ended	
		Nov. 17. 1906.	Dec. 1. 1906.
120 fire test, S.W. ..	per gal. ..	12	12
130 fire test, S.W. ..	.. ..	12½	12½
150 fire test, W.W. ..	.. ..	13	13
In bulk from tanks ..	.. ..	10	10
300 fire test .. ..	.. ..	12½ @ 13½	12½ @ 13½

NAPHTHA AND GASOLENE.

		Week ended	
		Nov. 17. 1906.	Dec. 1. 1906.
Naphtha, crude, car. lots, 68 @ 72 deg.	.. ..	15.00	15.00
Gasolene, 86 deg. ...	.. ..	23.00	23.00

PENNSYLVANIAN OIL RUNS from Nov. 23rd to Nov. 28th were:—Nov. 23rd, 148,868; Nov. 24th and 25th, 178,374; Nov. 26th, 78,749; Nov. 27th, 121,488; and Nov. 28th, 223,387. For the month of October, 3,286,040.

THE DELIVERIES OF PENNSYLVANIA OIL for the same dates were:—173,434; 261,629; 156,424; 149,043; 295,673. For the month of October, 4,969,286.

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, etc., in bulk, barrels and cases, during the week ended November 30th and from Jan. 1st, were as follows:—

	Week.	Year.	1905.
Refined, barrels and bulk	156,100	11,266,600	11,353,300
Refined, cases	160,000	14,069,100	18,668,000
Crude, barrels and bulk..	—	1,431,800	1,261,400
Crude, cases	—	325,000	245,000
Naphtha, barrels	—	277,300	507,600
Residuum, barrels	654,901	684,901	680,100
Lubricating, barrels ..	—	—	192,300
Total, barrels cde. eq. ..	282,649	22,505,954	24,536,013

CLEARANCES FOR THE WEEK.

During the week ended Nov. 30th, and since Jan. 1, the clearances of petroleum, in gallons, from the port of New York, were as follows:—

	Week.	Year.	1905.
Refined	6,722,150	425,465,198	452,119,511
Crude	—	235,000	931,591
Naphtha	25,600	14,695,584	11,808,093
Residuum	16,500	4,304,100	3,294,515

EXPORT STATISTICS.

The total exports from the port of New York and from the United States have been:—

	Gallons.
From New York, week ended Nov. 30th ..	8,962,866
Total from New York, rom Jan. 1st, 1906 ..	568,246,013
Same period last year	604,357,611
Decrease	36,111,598
From United States, week ended Nov. 30th..	14,334,096
Total from United States, since Jan. 1, 1906	1,121,151,412
Same period last year	1,158,019,286
Decrease	36,867,874

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The "Review" Shipping List.

DECEMBER 20, 1906.

(The following abbreviations are used in this table:—L. Left; P. Passed; Arr. Arrived; Sp. Spoken; Tr. Trading.)

Vessel.	From.	For.	Latest Date and Position.	Vessel.	From.	For.	Latest Date and Position.
ALICE ISABELLE	Sables d'Olonne	Philadelphia	L. Nov. 11	HAINAUT	Antwerp	Alexandria	L. Dec. 15
ALCHYMIST	Shoreham	Avonmouth	L. Dec. 18	HARRY	Swansea	Philadelphia	P. Fastnet, Dec. 6
AMERICAN	San Francisco	Tacoma	Arr. Nov. 26	WADSWORTH	Bremerhaven	Philadelphia	Arr. Dec. 16
APPALACHEE	San Francisco	Tientsin	Arr. Shanghai, Dec. 16	HELIOS	Middlesbro'	New York	P. Scilly, Dec. 13
APSCHERON	Batoum	St. Louis (Rhone)	P. Constant'ple, Dec. 8	HOTHAM	—	—	L. Nov. 24
ARAL	Philadelphia	Dover	P. Del. Break, Dec. 7	HOUSATONIC	Kurrachee	Sumatra	Tr. on Lakes btn. U.S. and Can.
ARAS	New York	Manchester	Arr. Liverpool, Dec. 19	IMPERIAL	—	—	P. Dardanelles, Dec. 14
ARGYLL	Astoria	San Francisco	L. Nov. 28	JOANNIS COUTZIS	Piræus	Ismailia	P. Singapore, Nov. 17
ASTRAKHAN	Tyne	Philadelphia	L. Dec. 6	J. B. AUG. KESSLER	Philadelphia	Hong Kong	P. Del. Break, Dec. 1
AUGUST KORFF	Manchester	Philadelphia	P. Eastham, Dec. 8	JAMES BRAND	Philadelphia	Santander	L. Dec. 19
AUREOLE	Philadelphia	Havre	L. Dec. 7	KURA	Cardiff	Philadelphia	Arr. Dec. 13
AZOV	—	—	Trading on W.C. of South Amca.	LA CAMPINE	Antwerp	Philadelphia	P. Prawl Pt., Dec. 18
BAKU STANDARD	Rouen	Kustendje	L. Algiers, Dec. 12	LA FLANDRE	Ghent	New York	P. Prawl Pt., Dec. 7
BALAKANI	Cardiff	Philadelphia	Arr. Dec. 5	LA HESBAYE	Antwerp	Philadelphia	L. Dec. 8
BATOUM	Tyne	Philadelphia	L. Dec. 13	LA MADELEINE	Antwerp	Dunkirk	L. Oct. 11
BAYONNE	Hull	Tyne	Arr. Nov. 23	LA VIGUESA	Vigo	Philadelphia	L. Dec. 7
BEACON LIGHT	Batoum	Hamburg	P. Oitavos, Dec. 14	LACKAWANNA	New York	Calcutta	Arr. Dec. 10
BEME	Rangoon	Bombay	L. Dec. 11	LE COQ	Havre	Philadelphia	Tr. btwn. Odessa & Novorossisk
BLOOMFIELD	Tyne	Philadelphia	P. Dunnet Head, Dec. 12	LOUTSCH	—	—	Arr. Dec. 18
BORJOM	Batoum	Alexandria	Arr. Nov. 29	LUCERNA	Philadelphia	Copenhagen	P. Algiers, Dec. 14
BRILLIANT	Hamburg	Philadelphia	P. Dunnet Head, Dec. 14	LUCIFER	Philadelphia	Venice	P. Sagres, Dec. 18
BROADMAYNE	Port Arthur (Texas)	Antwerp	L. Newport News, Dec. 7	LUCIGEN	Batoum	London	Arr. Dec. 7
BULLMOUTH	Balekappan	—	L. Dec. 12	LUCILINE	Dunkirk	Tyne	L. Constant'ple, Dec. 4
BULYSESSES	Cardiff	Borneo	At Port Said, Dec. 10	LUMEN	Cette	Batoum	Arr. Pauillac, Dec. 15
BURGERMEISTER PETERSEN	Philadelphia	Swinemunde	L. Dec. 11	LUX	Novorossisk	Bordeaux	Trading in Black Sea
CADAGUA	London	Philadelphia	In Downs, Dec. 13	MAKKAVEI	—	—	P. Gibraltar, Dec. 9
CALCUTTA	Shanghai	San Francisco	L. Oct. 29	MANHATTAN	St. Louis (Rhone)	Philadelphia	P. Dunnet Head, Dec. 12
CARDIUM	Balekappan	U.K. or Cont.	P. Las Palmas, Dec. 17	MANNHEIM	Stettin & Tyne	New York	P. Dardanelles, Dec. 14
CAUCASIAN	London	Philadelphia	P. Scilly, Dec. 12	MARGARETHA	Alexandria	Batoum	Arr. Malta, Dec. 15
CHARLOIS	New York	Amsterdam	Arr. Dec. 14	MEXICAN PRINCE	Cette	Batoum	Arr. Dec. 18
CHESAPEAKE	Messina	New York	L. Algiers, Dec. 11	MIRA	Batoum	Manchester	L. Dec. 8
CHESTER	Antwerp	New York	P. Scilly, Dec. 11	MUREX	Singapore	—	Arr. Dec. 18
CIRCASIAN	—	—	Trading on W.C. of South Amca.	NARRAGANSETT	London	New York	Tr. in China Seas
CLAM	Pulo Samboe	—	L. Dec. 16	NERITE	—	—	L. Dec. 15
COWRIE	Cardiff	Malta	Arr. Lisbon, Dec. 12	NEW YORK	New York	Southampton	P. Lizard, Dec. 9
CYMBELINE	Rouen	Penarth	L. Dec. 19	OCEAN	Antwerp	Philadelphia	Arr. Dec. 14
CZAR NICOLAI II.	Hamburg	Batoum	P. Gibraltar, Dec. 11	OILFIELD	Tyne	Philadelphia	L. Dec. 9
DAGHESTAN	Dunkirk	Batoum	P. Gibraltar, Dec. 11	ORANJE PRINCE	Banes	Flushing	Arr. Dec. 12
DAKOTAH	Hong Kong	San Francisco	L. Nov. 28	ORIFLAMME	Cette	Philadelphia	L. Dec. 7
DELAWARE	Manchester	New York	Arr. Nov. 28	OSCEOLA	Clyde	Genoa	P. Lizard, Dec. 19
DEUTSCHLAND	New York	Rotterdam	P. Scilly, Dec. 19	OTTAWA	Philadelphia	Hull	L. Dec. 8
DIAMANT	Tyne	New York	P. Dunnet Head, Dec. 16	OURAL	Antwerp	Batoum	Tr. Sts. Settlements & China Seas
ELAX	Port Arthur (Texas)	—	L. Dec. 12	PALEMBANG	—	—	L. Tyne, Dec. 3
ELISE MARIE	New York	Christiana	L. Dec. 13	PAULA	Stettin	Philadelphia	Arr. Dec. 3
ENERGIE	Philadelphia	Malmo	L. Dec. 14	PECTAN	Amsterdam	Tyne	L. Tyne, Dec. 13
ERIVAN	Tyne	Batoum	Arr. Dec. 17	PENNOIL	Rotterdam	Philadelphia	L. Nov. 7
EUPLECTELA	Amsterdam	Hamburg	Arr. Dec. 18	PERLAK	Madras	Aroe Bay	Arr. New York, Dec. 16
EXCELSIOR	Bremerhaven	New York	P. Dunnet Head, Dec. 8	PHOEBUS	Baltimore	Hamburg	Arr. Dec. 6
EZIO	—	—	Coasting Peru	PINNA	London	Philadelphia	P. Scilly, Dec. 19
FRANCE MARIE	Marseilles	Philadelphia	L. Dec. 3	POTOMAC	New York	Avonmouth	L. Dec. 13
GEESTEMUNDE	Philadelphia	Danzig	Arr. Dec. 14	PROMETHEUS	Rotterdam	New York	Arr. Dec. 9
GENESSE	Tyne	Philadelphia	Arr. Dec. 7	PRUDENTIA	Pensacola	Liverpool	L. Nov. 23
GEORGIAN	Tyne	Key West	Off I. of W., Dec. 10	QUEVILLY	Rouen	Philadelphia	Arr. Dec. 16
GOLDMOUTH	Cardiff	Soesoe	Arr. Dec. 15	RION	Dublin	Penarth	L. Constant'ple, Dec. 8
GUT HEIL	Philadelphia	Konigsberg	P. Scaw, Dec. 15	ROCK LIGHT	London	Kustendje	Arr. Dec. 19
				ROSSIJA	Honfleur	Tyne	Arr. Dec. 17
				ROTTERDAM	New York	Bremerhaven	

Vessel.	From.	For.	Latest Date and Position.
RUSSIAN PRINCE SALAHADJI	Batoum	Antwerp	Arr. Dec. 19 Tr. Sts. Settlem'ts and Java Seas
SAXOLEINE	Philadelphia	Rouen	Arr. Dec. 15
SEMINOLE	Calcutta	San Francisco	L. Nov. 19
SILVERLIP	Port Arthur (Texas)	Newport Nws.	Arr. Dec. 13
SINGU	—	—	Tr. in East Indies
SNOWFLAKE	Cette	Sulina	Arr. Dec. 17
SOPHIE	Kustendje ..	—	At Malta, Dec. 9
SPONDILUS	Singapore ..	Balekappan	Arr. Nov. 19
STANDARD	Hamburg ..	New York ..	P Dunnet Head, Dec. 17
STROMBUS	Singapore ..	—	P. Southend, Dec. 19
SURAM	Newport	New York ..	Arr. Dec. 18
SUWANEE	London	Kustendje ..	L. Constant'ple. Dec. 13
SVIET	Alexandria ..	Batoum	L. Theodosia, Dec. 7
TELENA	Cardiff	—	Arr. Port Said, Dec. 12
TEREK	Savona	Novorossisk	Arr. Dec. 7
TIFLIS	Batoum	Rouen	P. Havre, Dec. 17
TIOGA	Philadelphia	Manchester	Arr. Dec. 18
TONAWANDA	San Francisco	Whampoa ..	Arr. Dec. 7
TROCAS	Singapore ..	Soesoe	L. Nov. 8
TURBO	Philadelphia	Hamburg ..	Arr. Dec. 15
TUSCARORA	Yokohama ..	San Francisco	Arr. Nov. 20
TWINGONE	Rangoon ..	Calcutta	L Dec. 15
VEDRA	Avonmouth	Batoum	P. Sagres, Dec. 15
VILLE DE DIEPPE	—	—	In Port Havre, Dec. 12
VILLE DE DOUAI	Philadelphia	Rouen	Arr. Dec. 17
VOLUTE	Shanghai ..	Balekappan	Arr. Dec. 3
WEEHAWKEN	Philadelphia	Barrow	P. Del. Break, Dec. 5
WILLKOMMEN ..	Philadelphia	Copenhagen	Arr. Dec. 7
WINNEBAGO	San Francisco	Itosaki	L. Nov. 21

Latest Market Intelligence.

LONDON OIL MARKET.

Supplied by Messrs. Benjamin & Gee, 31, St. Mary Axe, E.C.

December 21st, 1906.

Refined petroleum is firm, the latest quotations being:—
Russian and Roumanian, 5⁷/₈d.; American 6³/₈d.; Water
White, 7³/₈d.

LUBRICATING OILS

are unchanged as follows:—

- American pale, £7 to £9 10s.
- American dark cylinder, from £7 2s. 6d.
- American filtered cylinder, from £11.
- No. 1 Russian, £10 7s. 6d.

TURPENTINE.

American Turpentine has been very firm since our last report, and is now quoted for Spot 49s. 6d., and for the first four months of next year 50s. 6d.

LIVERPOOL OIL MARKET.

December 21st.

Refined oils are quiet, and sellers now quote 6¹/₂d. for Russian, Galician or Roumanian; and 6⁵/₈d. to 7⁵/₈d. per gallon for American.

PETROLEUM SPIRIT continues at 1s. 0¹/₂d. to 1s. 3d. per gallon for American deodorised, according to quality on the spot.

LATEST AMERICAN PRICES.

NEW YORK, December 21st.

Refined, in cases, is steady at 10'10; Standard White, 7'60; Credit balances, 1'60c.

PHILADELPHIA, December 21st.

Standard White is still quoted at 7'45.

RUSSIA.

BAKU, December 17th.

The Baku oil market is firm. Light crude oil, spot, 23 copecs per pood; residuals, spot 24⁷/₈ copecs, future delivery 26 copecs.

BELGIUM.

ANTWERP, December 15th.

The petroleum market is unchanged. Price of Standard White, spot, 19¹/₂ francs per 100 kilos.; December, 19³/₄ francs; first three months 1907, 20 francs.

FRANCE.

PARIS, December 15th.

Illuminating oil is quoted in bulk, in whole tank waggons, 21 francs per hectolitre; spirit, 25'25 francs per hectolitre. Special white oil, 29 francs per hectolitre.

GERMANY.

HAMBURG, December 13th.

The kerosene market is firm. The price of American Standard White is 6'80 marks per 50 kilos, Russian, 6'55 marks.

ROUMANIA.

December 16th.

Francs.

Crude oil from different fields, including
pipe line charges, per 100 kgs. ... 3'90-4'20

Refined oil, exclusive of taxes ... 13'00- —
Motor benzine, including taxes ... 16'00-18'00
Benzine, doubly refined ... 24'00-25'00
Residuals in tank waggons, at refinery ... 3'20-3'30
Paraffin ... 120'00-125'00

Lubricating Oils —

Agricultural... 30-32
Prime ... 35-37
Extra ... 40-42
Royal ... 45-46

In barrels free on rail including octro tax of 12 fcs. per 100 kilo

PRICES FOR EXPORT.

Refined oil in tank waggons, per 100 kgs. 8'50- —
Benzine, sp. gr. 0'710-0'715 ... 15'50-16'50
„ sp. gr. 0'720-0'725 ... 14'50-15'50
„ sp. gr. 0'730-0'740 ... 11'50-12'50
„ sp. gr. 0'745-0'755 ... 7'50- 8'50

INDIA.

BOMBAY, December 4th.

Petroleum is steady.

Standard Oil Co., of New York.

Current rates are:—

American, "Snowflake," 150 deg. Rs. 6 0 2
„ Chester, 125 deg. 4 8 2
„ Monkey Brand, 125 deg. 4 2 2
„ Bulk, 125 deg. (in local made tins) .. 3 10 0
„ „ 125 deg. (8 Imperial gallons) .. 3 0 0
„ "White Camelia" brand, 125 deg. .. No stock.

The Asiatic Petroleum Company, Limited.

Current rates are:—

Burmah oil, in tins, per pair 3 2 0
Borneo oils, in tins, per pair 3 2 0
Sumatra "Rising Sun," bulk, per unit .. 3 0 0
„ „ tins, per pair 3 10 0
Silverlight cases, per case 4 8 0
Russian, "Anchor," cases 4 14 0

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IMPORTS of PETROLEUM into UNITED KINGDOM

*Specially prepared for
this Journal by . . .
the Custom House.*

FOR THE WEEK ENDED DECEMBER 10TH, 1906—

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	No. OF GALS.	PORT WHENCE.
Dec.	LONDON—			
4	London & India Docks Co..	Lub.Gr.	1,000	New York
4	Fielder, Hickman and Co...	Lub.	18,000	"
4	Produce Brokers' Co.	"	4,800	"
4	American Express Co.	"	100	"
4	Anglo-American Oil Co.	"	2,200	"
4	Union Lighterage Co.	Refined	2,250	Philadel.
4	London Oil Storage Co.	"	300,000	Pt. Arthur
	(Prudentia)			
4	London and India Dock Co.	Lub	900	Hamburg
4	J. L. Lyon and Co.	Turps Sub.	250	Antwerp
4	R. Park and Co.	Lub.	1,140	Marseilles
5	Schenker and Co.	"	240	Antwerp
5	D. C. Thomas and Son	Lub.Gr.	200	Brussels
6	G. W. Sheldon and Co.	"	120	Antwerp
6	W. Balchin	Lub.	8,000	Philadel.
6	Fielder, Hickman and Co...	"	9,600	"
7	H. Finkler and Co...	Resid.	4,800	Trieste
7	T. H. Lee	Lub. Gr.	460	Hamburg
8	London and Thames Haven Oil Co.	"	8,500	"
10	H. Finkler and Co.	"	10,000	Fiume
10	J. Spurling	"	480	New York
10	Anglo-American Oil Co.	"	68,520	Philadel.
	LIVERPOOL—			
10	Meade-King, Robinson & Co.	Lamp	607,750	Pt. Arthur
	(Prudentia)			
10	"	Lub.	66,330	Philadel.
10	Geo. B. Taylor	"	32,200	"
10	Vacuum Oil Co.	"	8,000	"
10	Worthington and Boler	"	3,200	"
10	Crew, Levick and Co.	"	10,670	"
10	W. B. Dick and Co...	"	18,840	"
10	"	"	6,120	New York
10	Geo. B. Taylor	"	46,600	"
10	Vacuum Oil Co.	"	7,200	"
10	Liverpool Storage Co.	"	3,400	"
10	A. Hopps and Sons	"	2,520	"
10	"	"	10,240	Baltimore
	BRISTOL—			
4	H. R. James and Sons	"	2,400	New York
5	Anglo-American Oil Co.	Lamp	1,081,070	"
	(Vedra)			
5	"	Gas	314,550	"
6	Pickfords	Lub.	1,600	Hamburg
6	Anglo-Bosphorus Oil Co.	Lub. Gr.	2,240	"
6	First Anglo-Russian Oil Co.	Lub.	450	"
	GRIMSBY—			
4	J. Sutcliffe and Son	"	320	Antwerp
	HULL—			
4	Wisons and N.E. Railway Shipping Co.	"	5,280	"
6	"	"	7,180	Hamburg

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	No. OF GALLS.	PORT WHENCE.
Nov.	2 Wisons and N.E. Railway Shipping Co.			
		Lub.	2,400	Hamburg
6	"	"	240	Riga
6	"	"	1,200	Antwerp
7	W. Gilyott and Co.	"	4,000	Trieste
7	"	"	73,400	New York
7	Wisons and N.E. Railway Shipping Co.	"	1,640	"
7	"	"	440	Riga
7	J. Good and Sons	"	130	Bergen
	MANCHESTER—			
6	J. T. Fletcher and Co.	"	320	Antwerp
6	Bramwell, Fern and Co.	"	430	"
6	Schofield and Co.	"	500	Hamburg
6	Anglo-American Oil Co.	"	399,180	Philadel.
	(August Korff)			
6	George B. Taylor	"	117,160	New York
7	Liverpool Storage Co.	"	8,510	"
10	W. Hodgson and Co.	"	650	Hamburg
	NEWCASTLE—			
4	Tyne-Tees Steamship Co	"	1,200	Antwerp
6	"	"	1,400	Hamburg
8	"	"	3,690	Antwerp
	SWANSEA—			
6	Burgess and Co.	"	2,730	Hamburg
	GRANGEMOUTH—			
6	J. Currie and Co.	"	400	"
6	"	"	360	"
	LEITH—			
4	J. Currie and Co.	"	3,590	Stettin
6	"	"	640	Hamburg
6	W. Graham-Yooll and Co.	Lamp	2,180	"
6	"	"	2,180	"
6	J. Currie and Co.	Lub.	340	"
8	"	"	160	"
8	"	"	240	"
8	W. Graham-Yooll and Co.	"	3,250	"
8	G. Gibson and Co.	"	680	Antwerp
	BELFAST—			
4	G. Heyn and Sons	"	1,000	Riga
	Total for Week	"	3,320,160	

FOR THE WEEK ENDING DECEMBER 17TH, 1906—

Dec.	LONDON—			
11	R. Park and Co.	Lub.	1,060	Marseilles
11	G. W. Sheldon and Co.	Lub. Gr.	907	Antwerp
12	Lon. and Thames Haven Oil Co.	Spirit	28,000	Rotterdam

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== QUALITY TELLS. ==

To Dealers only.

DATE	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
Dec.				
12	Scott's Wharf	Lub.	2,440	New York
13	G. W. Sheldon and Co. ..	"	250	"
13	Anglo-American Oil Co. ..	"	49,400	"
13	T. H. Lee	Lub.Gr.	390	Hamburg
14	Scott's Wharf	Lub.	2,000	Philadel.
14	Fielder, Hickman and Co... ..	"	4,800	Philadel.
14	T. H. Lee	"	180	Hamburg
15	Fielder, Hickman and Co... ..	"	4,800	"
15	Produce Brokers	"	4,800	"
17	W. Balchin	"	10,280	Hamburg
17	London and India Docks Co. ..	"	2,400	"

LIVERPOOL—

11	Midland Railway	"	1,200	Philadel.
12	Pickford's, Ltd.	"	580	Hamburg
12	Crew, Levick and Co.	M.Colza	15,600	New York
14	Vacuum Oil Co.	Lub.	4,760	"
14	W. B. Dick and Co.	"	4,110	"
14	"	"	6,160	Philadel.
14	Liverpool Storage Co.	"	4,800	Stettin
14	Phillips, Sons and Co.	"	640	Hamburg
14	Vacuum Oil Co.	"	4,080	Rotterdam
15	Geo. B. Taylor	"	2,400	New York
15	Valvoline Oil Co.	"	2,050	"
15	Anglo-American Oil Co.	Gas	689,400	Philadel.
	(Tioga)			
15	Crew, Levick and Co.	Lub.	13,830	"
15	"	M.Colza	7,250	"
15	Worthington and Boler	Lub.	4,000	"
15	Meade-King, Robinson & Co. ..	"	16,080	"
15	"	"	27,200	Baltimore
15	"	Resid.	12,000	Trieste
17	C. W. Field and Co.	Lub.	410	Antwerp
17	C. C. Wakefield and Co.	"	520	"
17	Pickford's, Ltd.	"	400	Hamburg
17	W. Gibson and Son.. ..	Lamp	1,850	Boston
17	Liverpool Storage Co.	Lub.	60,200	New York

BRISTOL—

13	W. Smith and Co.	"	38,400	"
13	"	Lamp	12,800	"
13	H. R. James and Sons	M.Colza	4,000	"
13	"	Lub.	12,600	"
14	Spellers and Bakers.. ..	"	1,000	"
14	Anglo-Bosphorous Oil Co... ..	"	2,000	Hamburg

GRIMSBY—

11	J. Sutcliffe and Son	"	880	Antwerp
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HULL—

11	Wilsons and N.E. Railway Shipping Co.	"	700	Hamburg
11	Hull & Netherlands S.S. Co. ..	Tar oil	5,200	Rotterdam
13	Wilsons and N.E. Railway Shipping Co.	Lub.	20,800	Hamburg
14	"	Spirit	1,200	Reval
14	"	Lub.	400	Antwerp
14	"	"	25,800	New York

DATE.	PORT AND IMPORTERS.	DESCRIPTION.	NO. OF GALLS.	PORT WHENCE.
	MANCHESTER—			
Dec.				
11	Worthington and Boler	"	2,000	Philadel.
11	J. T. Fletcher and Co.	"	960	Antwerp
14	"	"	240	Antwerp
14	Manchester Liners	"	1,640	Philadel.
14	J. L. Thomas and Sons	"	2,400	Philadel.
14	Liverpool Storage Co	"	5,950	"
14	Crew, Levick and Co.	"	12,660	"
14	"	M.Colza	9,400	"
15	G. B. Taylor.. ..	Lub.	124,000	"

SOUTH SHIELDS—

13	Jas. Knott and Son.. ..	Fuel	404,230	Pt. Arthur
	(Pectan)			

DUNDEE—

13	D. Alexander and Sons	Crude	400	Hamburg
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GLASGOW—

11	J. and A. Allan	M.Colza	5,000	Philadel.
11	"	Lub.	49,880	"
11	Anchor Line	"	2,040	New York
11	"	"	57,280	"

LEITH—

14	J. Cormack and Co.	"	1,200	Riga
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BELFAST—

13	G. Heyn and Sons	"	2,000	"
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CORK—

11	Palgrave, Murphy and Co.. ..	"	610	Hamburg
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LIMERICK—

13	Consolidated Petroleum Co. ..	Lamp	846,000	New York
	(Kura)			

Total for the Week .. 2,644,890
Total for the past Fortnight .. 5,965,050

PATENTS.

APPLICATIONS FILED IN GREAT BRITAIN.

Improvements relating to the Production of Oils for Explosion Motors and other purposes.—Henry Harris Lake (Rutgerswerke Aktien Gesellschaft, Germany), London. No. 27629 of 1906.

Improved Process for the Production of Petroleum Compounds with Low Flashing Points.—Sherard Osborn Cowper-Coles, Westminster, London. No. 27945 of 1906.

Process for Enriching Light Mineral Oils or Hydrocarbons.—Frederick Grill Claussen, London. No. 28014 of 1906.

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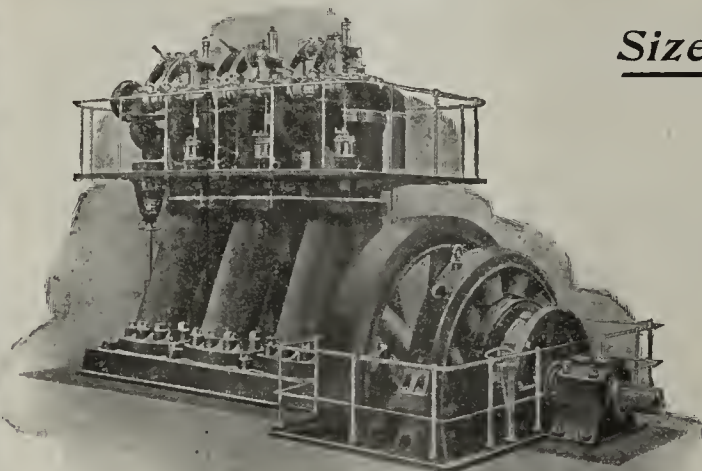
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